ABSTRACT OF

The Milroy Lectures

ON

OCCUPATIONS AND TRADES IN RELATION TO PUBLIC HEALTH.

Delivered before the Royal College of Physicians of London,

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LECTURE I.

[AFTER a few prefatory remarks and a eulogistic reference to the labours of Sir J. Simon, the late Dr. Headlam Greenhow, Dr. Farr, and the Medical Officer and Inspector of the Local Government Board, Dr. Arlidge spoke of British hygienic literature. In speaking of the even ampler work of continental authorities, such as Tardieu, Vernais, and Layet in France, and Hirt, Merkel, and Pettenkofer in Germany, Dr. Arlidge drew especial attention to the treatise of Ramazzini of Padua, written at the beginning of the eighteenth century, upon "Diseases of Tradesmen and Artificers." He then proceeded as follows.]

Coming now to the immediate subject matter of my lectures, it is firstly necessary to state the order to be pursued. In other words, some sort of classification of the numerous trades and occupations of this country, with reference to the modes in which they may affect the health, is absolutely needed, for it would be tedious, and would lead to constant repetition, to take up occupations seriatim, and to discourse upon each one as if it stood apart, and without relation to all others. Therefore, in the first place, I shall divide occupations into two principal classes: The first, in which the occupation is unconnected with any manufacturing process properly so called, or, in other words, those occupations which, in the language of political economists, are not directly concerned in adding to the wealth of the community. The second, in which labour is directed to raising new material as wealth from the earth, or to converting natural products for the use of mankind, whereby they acquire a value not otherwise appertaining to them, by means of particular methods of treatment, comprehended under the term "manufacturing processes." All such operations, therefore, augment the wealth of the country.

[The subdivisions which the lecturer included under the above first class were:—1. Those *dolce far niente* folk who have no definite occupation—the drones of society,—after whom come a large troop of individuals usefully and profitably engaged, but who are not producers of wealth in a direct way—viz.: 2. The governing classes, magistrates, administrators, &c. 3. The professional classes, for long limited to clergy, lawyers, and doctors, but now inclusive of "followers of the fine arts, of science and literature, the directors of the higher education of the country, engineers, and architects, &c." 4. The army and navy. 5. Clerks, agents, secretaries, and collectors. 6. Retail and other traders. 7. Artisans, including tailors, dressmakers, &c., as well as mechanics. 8. The serving classes. 9. Labourers—a miscellaneous body. The time at the lecturer's disposal compelled him to pass over all these groups, and to confine attention to those occupations that fall within the second class, which create wealth—viz., agriculture, mining, and manufacture, or rather to the last two named. He proceeded.]

A review of the health relations of mining and manufacture demands for their adequate discussion and elucidation a classification based on some distinct principle. The one I have adopted is etiological, the attempt being made to discover with regard to each occupation what conditions attaching to it are causative of disease among those engaged in it. The carrying out of this principle of classification leads me to recognise nine groups of such conditions causing disease—viz.: 1. The generation of dust. 2. The employment of materials of a distinctly poisonous or highly noxious nature. 3. The evolution of vapours of poisonous or injurious properties. 4. The action of excessive temperature. 5. The evolution of electricity. 6. Abnormal atmospheric pressure. 7. Circumstances affecting the special senses. 8. Excessive use, friction, or strain of parts of the body. 9. Exposure to infectious, contagious, or parasitic diseases. A tenth group rightly might be instituted for occupations specially chargeable with the production of accidents. However, as it is not my intention to treat of accidents in connexion with the several occupations, I content myself with this allusion to the matter.

The range and severity of these several groups of disease-producing agencies differ widely. The first three operate extensively and in a multitude of occupations; the rest have limited spheres of action, and, for the greater part, possess less energy for evil. Again, it is seldom that the morbid conditions represented by any one group are found alone as disease factors. Those of any two or more may be conjoined, when the problem arises, to which of them do the observed injurious consequences belong? For example, the evils of dust are frequently aggravated by the inherent deleterious qualities of that dust, and may be further intensified by the presence of heat and moisture. So, again, the overheating of work-rooms may have its injurious consequences augmented by vicissitudes of temperature, and by postures of the body detrimental to its general wellbeing. Nevertheless, the establishment of these primary factors in the production of trade diseases is only one step towards the solution of the problem as to how far the pursuit of an occupation is chargeable with the entire sickness and mortality experience shows to be connected with it. In other words, the study of details will speedily convince us that, besides these primary or *intrinsic* factors, there are many circumstances of a collateral character that give intensity to them, or otherwise modify their activity, but are not essential parts of the manufacturing operations These collateral conditions I shall call *extrinsic*. To leave their consideration out of sight, in estimating the consequences of any occupation upon health from bare statistics of mortality or of sickness, will vitiate the conclusions arrived at. It has already been noticed that Dr. Headlam Greenhow, after having most diligently examined the mortality returns of manufacturing and of non-manfacturing towns, perceived distinctly that, besides consequences assignable to occupation, there were other outside circumstances largely affecting the figures he was analysing. Moreover, the influence of extrinsic conditions has to be borne in mind, not merely when we would estimate the effects of an occupation on the health of the employed by comparing the statistics of a manufacturing with a non-manufacturing population; but equally so when the problem is extended to a comparison of one manufacturing town, or of one description of manufacture with another; and, further still, when the health returns of one factory are examined relatively to another, even when the two are situated in the same locality.

To summarise. These extrinsic or collateral circumstances exercise an influence varying in degree upon manufactures of all kinds. They are—the situation of the factory, whether urban or rural; its site in relation to the soil, climate, and surroundings; the accommodation at hand suitable to its workers; the density, the diet, and the habits of the population around; and, in a general way, the moral atmosphere of the locality. Next, as to the factory itself, its construction, ventilation, and warming, and its general arrangements for facility of the work pursued in it. Thirdly, as to the workpeople themselves, their racial character, the ratio of constitutional disease among them, whether attributable to early marriages or to frequent intermarriages, and the position their occupation holds in the social scale. Fourthly, the proportion of young to old among the factory hands, the ratio of the two sexes, the regularity of the work obtained, and the extent of night-work. All these matters exercise more or less effect on the health of those engaged in any occupation over and above the intrinsic circumstances belonging to it, though in very varying degrees.

The operation of the several extrinsic conditions attaching to manufactures will be sufficiently obvious; but I may be pardoned making a few additional observations on two of them. First, of the character and position of an occupation in the social scale. As a general rule an easy, light occupation, and the more so if also held to be genteel, will attract

to it a large ratio of weak lives, pronounced incapable of active labour. Such an occupation we have in that of clerks, and it is one that illustrates the fallacy of the inference that, because statisticians have shown phthisis to be very rife among clerks, the occupation is to be credited with the evil. For although the sedentary character of their business be beyond dispute unfavourable to health, the proportion in which phthisis prevails among them must be augmented by the larger ratio of infirm lives that enter upon that calling.

It may be advanced, as a general principle, that a manufacturing population reflects in its physical and moral conditions the character of the labour pursued, viewed both in reference to the social grade allotted to it and to the sanitary conditions and surroundings appertaining to it. Each business asserts to itself a social status, or else submits to having one thrust upon it; and unfavourable, as well morally as physically, is the position of those labouring people whose lot is cast among occupations which by common consent carry with them the badge of inferiority or degradation, or at best do not elevate them in the social scale.

The calling of a scavenger, or of a common labourer having no definite trade, or of a miner, in all which occupations the labour required is of a coarse character, calling chiefly for animal strength, the absence of any stimulus to awaken sentiments of self-esteem must operate in a depressing direction on the individual. The like reflection may be made where numbers of persons are collected together in an occupation of a monotonous character, addressing itself in no degree to the higher faculties, but reducing them pretty much to the position of supplementary appendages to machinery. This we see exemplified particularly in textile factories, where, indeed, the appellation of "hands" is assigned the workers, as if only mechanical factors. So, likewise, in the case of employments acknowledged as hazardous, it may generally be noted that there is a recklessness of conduct with regard to health and life. Moral influences will bear fruit in physical results; so that where an occupation presents in itself no conditions positively injurious to bodily health, it may indirectly, by its moral and social surroundings, prove to be so.

Another element to be borne in mind when weighing the results of statistics in different towns is the shifting or the more fixed character of their several populations. Non-manufacturing towns, especially those in agricultural districts, often have stagnant populations; and in many places where some manufacture is carried on the movements of the population are inconsiderable. In larger cities, on the contrary, where there is a growing trade and abundant demand for labour, the population undergoes perpetual changes and is recruited from elsewhere by new dwellers.

This point I examined in my own neighbourhood, the Potteries, in respect of infirmary out-patients all being occupied as potters, by noting the place of birth of themselves and of their parents. Taking 500 of them, I found that 440 were natives and 60 born outside the district. Extending the inquiry to the origin of their parents, it came out that both father and mother were in 270 instances pottery residents, and in 120 had immigrated from the country, and that in 110 other cases one parent was of country origin. These figures illustrate how largely a manufacturing town population is fed from outside areas, and so gathers new vitality therefrom. It is a circumstance that works for good by tending to diminish the ratio of sickness and mortality and the intensifying of hereditary blemishes.

Calculations based on mortality returns have been extensively employed to solve the problem of the effects of particular employments upon those engaged in them, and non-manufacturing, have, with this object in view, been compared with manufacturing centres. The crude totals have at times been dealt with in the absence of information as to the proportion of the factory hands to the whole population, and as to the relative ratio of their mortality. And I do not hesitate to say that deductions so arrived at express no whole truths. At the same time their teaching is yet further vitiated by the circumstance that their occupations, when kept in view at all, are dealt with in regard to any one manufacture, as if all its processes were alike in sanitary features. For example, of what value is a comparison between Preston and Liverpool for the purpose of determining the effect upon health of the textile trades in the former town? Surely the vital conditions of the two places are so opposite as to preclude the attempt, and any inference drawn from their several mortality returns would be unjust to both.

Dr. Arlidge showed how the health statistics of factory hands have to be corrected by the consideration that in every large factory many are employed for work other than that directly connected with the particular manufacture. Few indeed are the occupations in which dust is not thrown off. In none can it be held as absolutely harmless, for the lung tissue must be just so much the worse and less effective for its purpose in proportion as it is embarrassed with dust. We all recognise the difference to the respiratory organs according as we breathe the smoky and dusty air of a city, or the pure air of a mountain or wide-spreading prairie. We happily can survive the former position for a goodly period, but we cannot boast of the easy efficient breathing of the mountaineer, and sooner or later the intimate tissue of the lungs loses elasticity and its capacity for the inflow of air. What occurs to the ordinary citizen becomes magnified ten or a hundredfold to those engaged in dusty occupations, and more especially where the dust itself possesses noxious properties of its own. But unless dust has this latter quality, it is remarkable with what indifference its inhalation is treated by the majority of workmen. For, in one sense unfortunately, it does not for the most part awaken attention by any immediate tangible consequences. Its action is very slow, but it is ever progressive, and until it has already worked its evil results upon the smaller bronchial tubes and air-cells, and caused difficulty of breathing, with cough and spitting, it is allowed to pass as a matter of indifference—the inconvenience of the trade. If it were always charged with some noisome smell, or did it obviously and quickly strike down its victims, like the unseen poison of fever, it would not fail recognition in all its pernicious consequences.

Bronchitis, asthma, fibroid pneumonia, and consumption occupy a foremost place in the category of causes of British mortality; and I am convinced that these maladies are largely attributable to the inhalation of dust, operating *per se*, or in conjunction with constitutional proclivities and insanitary surroundings. Pathologists tell us of the presence of bacilli in tubercular disease, and favour the belief that these minute bodies are the cause of it. This notion may represent a whole truth, or only a partial one; in my opinion, the latter. For I doubt if these bacilli actually develop phthisis, unless there be some antecedent change in the vitality of the affected tissue, a change wrought, in no small number of cases, by inhalation of dust and vapours. Further, we have to accept the fact that dust induces a malady bearing a strong similitude to tubercular phthisis, and yet that the malady is not tubercular in actual nature. In cases of potter's consumption from inhaled dust occurring under my own observation, bacilli have been sought in vain, excepting where lung abscess has occurred, preceded usually by hæmoptysis and other indications that tubercular mischief has been at work and complicated the malady. For it cannot be denied that the dust-produced lung disease may coexist with tubercular phthisis; and further, that where labour is prosecuted in a dusty atmosphere tubercular mischief, in those constitutionally predisposed to it, is more likely to happen.

THE HIGH DEATH-RATE OF MANCHESTER.—An important meeting of citizens was held in the Manchester Town-hall last week to present the Mayor with a memorial, signed by 3629 inhabitants and workers in Ancoats, calling attention to the excessive mortality in the district, consequent upon overcrowding and unhealthy dwellings, and suggesting a number of remedies. Mr. Charles Rowley, speaking in support of the memorial, said it was thoroughly representative, and included the signatures of factory operatives, skilled artisans, employers of labour, ministers of religion and others, residing in what was the greatest hive of industry in Lancashire. The memorialists demanded the suppression or abatement of the smoke nuisance. There was, he said, poison in the air, filth in the rivers, and dirty surroundings which drove men and women to despair and drink. They asked for more vigorous sanitary measures, the removal of bad and insanitary property, the opening up of courts and other necessary improvements. Other gentlemen spoke in support of the memorial, and the Mayor, in reply, said that the subject was worthy of, and would receive, the most careful consideration of the City Council.

Clinical Lectures
ON
CASES OF DIFFICULT DIAGNOSIS.

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LECTURE VIII.

TUBERCULAR PERITONITIS IN THE ADULT.

(*Continued from page 463.*)

II. CHRONIC TUBERCULAR PERITONITIS.

THE chronic forms differ greatly from the acute, but they also present considerable variations in their symptoms and in the course they pursue. Various divisions have been proposed, so as to include these varieties, but most of them are unsatisfactory, and I think it will be found best to group them according to the nature of the exudation with which they are accompanied—that is, into the adhesive, the ascitic, and the suppurating forms.

In only ten cases the family history of the patients who were the subjects of the chronic forms of tubercular peritonitis is recorded; and of these, five had a history of phthisis in the family, and five were the children of parents who had been free from all tubercular disease. We again, therefore, encounter in the outset of our inquiries the same fact we before met with in the acute form—viz., that tubercular peritonitis often occurs in those who have no hereditary predisposition to tubercular complaints. On account of the great variety in the symptoms and course of the different forms of chronic tubercular peritonitis, we must consider them separately, and I shall first direct your attention to that in which the tendency of the complaint is to terminate by adhesions of the peritoneal surfaces.

(*a*) *The Adhesive form of Chronic Tubercular Peritonitis.*

The male sex seems much more liable than the female to this form, for, of twenty-three cases collected by Bouillaud or recorded in our books, seventeen were men and only six were women. As regards age, females are more liable to it below twenty than males, for two out of six occurred at this period in females, and only one out of sixteen amongst males. This fact accords with my own observations, and may be useful in the diagnosis of doubtful cases in young persons.

The complaint may commence very insidiously, or it may begin with the symptoms of acute peritonitis; the former is the more common. In four out of seven of our cases the patient first complained of weakness and loss of flesh, along with cough and dyspnœa. This was followed by slight pain of the abdomen, with tenderness on deep pressure, but these symptoms were often so slight as to be easily overlooked. Generally the patient at first suffered more from distension after food and other signs of dyspepsia than from any positive pain, and there was loss of appetite, with constipation, sometimes alternating with attacks of diarrhœa. The temperature was generally slightly raised towards evening, but at this period it rarely rose above 100°, sinking to the normal point in the morning. It is not to be wondered at if in most of these cases the patient is supposed to be suffering only from dyspepsia, and it is not until a decided loss of flesh and strength or marked febrile symptoms show themselves that the suspicions of the medical attendant are aroused as to the more serious nature of the complaint.

It now and then happens that the disease runs its course without any more definite symptoms than those above mentioned. Of this there are three examples in our records, in all of which, although the usual evidence of chronic tubercular peritonitis was discovered after death, no mention is made in the histories of any symptoms pointing to this condition. In one the patient died of chronic disease of the hip-joint, and no complaint of pain of the abdomen is recorded during the whole of his illness; in a second there was a history of old syphilis, and the patient succumbed to an attack of sloughing of the fauces, the only abdominal complication being intractable diarrhœa. In the third there had been wasting and diarrhœa along with doubtful physical signs of tubercular phthisis, but there was no record of any pain of the abdomen or other signs pointing to the peritoneum. In all of these there was, however, an elevation of the temperature towards evening, but this might easily be referred to the other complaints from which the patients were suffering. I have seen cases in which the absence of pain and tenderness of the abdomen was most puzzling, and I would therefore impress upon you the necessity of always most carefully examining the abdomen in any case in which either you have obstinate diarrhœa, or where without diarrhœa there is an evening rise of temperature for which you are unable to account.

In two of the cases commencing with symptoms of peritonitis, the disease was ushered in by rigors, severe pain of the abdomen, and vomiting. This method of invasion was rare, usually a fixed pain in the abdomen, along with some distension, being the earliest symptom. The pain was seldom severe, was mostly located about the umbilicus or in the right hypochrondrium, was increased by movement, often after eating or an action of the bowels, and was relieved by the recumbent position. It was almost always attended by loss of appetite, thirst towards evening, flatulence, and constipation, alternating with diarrhœa.

But cases occur which are most puzzling, and which may easily lead to serious errors in diagnosis. I refer to those in which the disease commences in the pelvis, and where for some length of time the morbid action is limited to the organs contained therein. The subjects of this form are usually young females who have suffered for some time from amenorrhœa. They complain of a fixed pain in the hypogastrium, aggravated by exercise or by an evacuation of the bladder or bowels. The pain varies in intensity from day to day, and is often only relieved by resting on the back. The patient slowly loses flesh and strength, and the temperature, at first normal, shows a tendency to rise towards the evening. There is no distension or tenderness of the abdomen, but the uterus can be sometimes felt, even at an early period, to be fixed by the adhesive inflammation set up by tubercular mischief in the Fallopian tubes or ovaries. When I was a young practitioner a case of this kind came under my notice that I mistook for hysteria, and its fatal termination made a lasting impression on my mind, and has acted as a warning to me ever since.

CASE 4.—A young lady, about twenty years of age, consulted me on account of an occasional pain she experienced in the hypogastrium, but the exact seat of which she was scarcely able to define. The pain was not very severe, and there were no symptoms indicating any derangement of the digestion. There had been no marked loss of flesh, there were no physical signs pointing to mischief in the lungs, and I therefore concluded the disease was of a hysterical character, and would soon disappear under appropriate treatment. In this, however, I was disappointed; the pain persisted, coming on occasionally each day, not lasting more than a short time, but still sufficiently severe to cause the patient to complain of it. She removed to a distant part of the country, in no way improved, and I heard no more of her for twelve months. At the end of that time I was requested to visit her at her home, and I found her extremely emaciated. Both lungs presented evidence of tubercular consolidation, whilst the abdomen was large and distended, apparently with general adhesion of the viscera. She stated that after she had returned home the pain had gradually increased, and instead of being confined to the hypogastrium it had become diffused over the whole abdomen; diarrhœa had set in, along with cough and expectoration; and when I saw her there was no doubt she was sinking from tubercular affection of the lungs and peritoneum.

In whatever way the morbid action may commence, sooner or later attacks of local peritonitis make their appearance, affecting in turn different portions of the abdomen. Pain may come on suddenly and be very severe, and be attended with well-marked tenderness and vomiting, or it may be a less prominent symptom. It often varies in intensity from day to day, and after a time gradually subsides or makes its appearance in some other part of the abdomen. The tongue is usually foul, with a red tip and edges, the patient complains of thirst, the appetite is very bad, and the bowels are either constipated or affected with diarrhœa. Night sweats often present themselves, and the patient rapidly loses flesh and strength. The pulse is quick, and the temperature elevated towards night, but in all our recorded cases it seldom ranged above 102°. The acute symptoms often for a time subside, and the patient is flattered by the signs of both local and general improvement, until a fresh attack again dashes his hopes to the ground. After repeated attacks of

this kind, or after a more continuous but less acute affection, the emaciation and feebleness become more pronounced, the appetite fails, obstinate diarrhœa sets in, the temperature rises higher at nights than before and does not fall to the normal point in the morning, the pulse is smaller and more rapid, and the patient gradually sinks from exhaustion. In some of our cases delirium closed the final struggle, but more generally the intellect remained unaffected to the last.

I have described the death of the patient as resulting from a succession of attacks of subacute peritonitis, but this is not always the case, for we see the abdominal symptoms sometimes entirely subside, and death result from a tubercular affection of the lungs or of some other organ. This course of the complaint has seemed to some authors so important in its clinical aspects that they have described it as constituting a distinct form of the disease. A well-marked instance of it occurred a short time since in my wards, which it may be worth while to recall.

CASE 5.—A man was admitted who had been attacked with rigors, followed by the usual symptoms of pneumonia, and accompanied by the physical characters of that disease. The temperature did not fall at the usual time, the cough and expectoration persisted, and after some weeks it was evident that the consolidation revealed by the physical signs must be of a tubercular character. On the twenty-sixth day he was suddenly attacked with the symptoms of a subacute form of peritoneal inflammation, which persisted for some weeks and then gradually subsided. The pulmonary indications again became prominent, and he died with the ordinary symptoms of phthisis. On post-mortem examination the peritoneum was found to be greatly thickened with lymph and tubercle, the intestines being generally bound together by adhesions, whilst there was a tubercular cavity in the apex of the right lung.

In this case, then, we had first an attack of tubercular pneumonia, the symptoms of which for a time subsided and were replaced by those of peritonitis, which again gave way to those arising from the original affection of the lung. I have met with cases of this kind more frequently in private than in hospital practice, and the peritoneal inflammation may be easily overlooked. You must never, however, trust to the mere complaint of pain and tenderness of the abdomen, but must take care that there are also well-marked physical signs before you decide as to the nature of the case.

CASE 6.—A few months ago a foreign sailor was admitted into my wards who was unable to speak a word of English. He was supposed to be suffering from typhoid fever, had a permanently elevated temperature and diarrhœa and a somewhat enlarged spleen, but no cough or expectoration. He pointed to the right side of the abdomen as the seat of his suffering, and complained when pressure was made on this part. In a short time we found slight comparative dulness and a little crepitation at the apex of one lung, and the range of temperature was observed to differ from that of typhoid. It was therefore diagnosed as a case of acute tuberculosis, and from the persistence of the pain and tenderness of the abdomen I concluded there was tubercular peritonitis, although there were no distinct physical signs of that condition. The necropsy, however, revealed no evidence of peritonitis, but at the site of the pain and tenderness was a large tubercular ulceration of the colon.

Occasionally death occurs from other causes. Thus in one of the cases profuse hæmorrhage had taken place into the peritoneum; but such instances are so rare, they are scarcely worth much consideration.

As the symptoms are often indefinite and the course variable and protracted, the physical signs connected with the disease are of the greatest value. At first the abdomen may be merely distended with flatus, and whenever this is observed in young persons the practitioner should be on his guard, for I have in different instances known the physician consulted, not on account of any pain, but simply from the inconvenience arising from the abdominal distension. On percussion the note is generally tympanitic, or in the more severe cases there is, even in the earliest stage, a certain amount of dulness in the hypogastrium or in the flanks. The dulness does not necessarily vary with the position of the patient, for if adhesions be present it may keep its place, however the trunk is inclined; or if they be only partial, the dulness may shift very slowly from side to side when the patient's position is reversed. As time goes on the dulness in most cases gradually disappears, and the distension lessens, or it may be replaced by a contracted condition arising from the adhesion of the viscera. In many cases the abdomen gives to the hand a sensation as if the intestines were generally glued to the abdominal parietes, and the attenuated skin seems to slide over the subjacent parts. The veins are usually enlarged, but not to the same extent as in cirrhosis of the liver. In some cases the fluid is never completely absorbed, but, being confined by adhesions, it presents a localised swelling that is dull on percussion, and whose boundaries do not vary with the position of the patient. Such cases are of great importance, as the tumour so formed may be readily confounded with that arising from ovarian disease.

We found that in the acute cases the omentum sometimes formed a tumour across the epigastrium, and the same may occur in the form of the disease we are now considering. Ordinarily it occupies the umbilical region, but it may be displaced by adhesions, and may then be placed on one side of the abdomen, or be situated even in the hypogastrium. These omental tumours usually afford a dull note on deep, but a slightly tympanitic sound on light, percussion. Yet even a light stroke elicits a note that is duller than the neighbouring parts. I have seen elongated tumours that gave a dullish note on percussion, but which could be somewhat indented by the pressure of the finger, and varied in size from day to day, according to the action of the intestines. These seemed to consist of fæces, and were probably the result of an imperfect action of the colon, arising from its contraction being enfeebled by adhesions. You would expect to find tumours originating from enlarged mesenteric glands, but these are rare, glandular tumours of this nature being readily hidden by the distended coils of the intestines in front of them.

When speaking of the morbid anatomy of tubercular peritonitis, I drew your attention to the fact that in the majority of cases the lungs were found to be affected with tubercle after death. It is therefore an important question how far we can count upon the presence of the physical signs indicating pulmonary disease as an assistance in the diagnosis of a doubtful case of chronic tubercular peritonitis. In all the seven cases of adhesive tubercular peritonitis there were signs during life of an affection of the lungs or pleura; in five the physical signs of consolidation at the apex of the lung were distinct; in one there were indications of pleuritic effusion, but none of pulmonary tubercles, although some scattered nodules were found after death; and in the other there were signs of pleurisy, the results of which were found on post-mortem examination, although no tubercles could be discovered in the lungs. But it should be mentioned that the physical signs were only marked towards the close of life, so that we cannot rely upon always finding them during the earlier periods of the disease. Judging from my own experience, I should say pleurisy with effusion, but without much pain or elevation of temperature, is the most common complication of this form of the malady.

It is difficult to fix the exact duration of the fatal cases on account of the insidious manner in which many of them commence. Of seven whose histories are carefully recorded, one died between four and five months, one within six months, one within seven months, two within twelve months, one had been ill eighteen months, and in one case it was doubtful when the first abdominal symptoms showed themselves, but he had been out of health for at least twelve months.

But it may be asked whether, instead of terminating in death, this form of tubercular inflammation may not be susceptible of cure. In an ordinary case of inflammation of a serous membrane nature removes the ill effects of the morbid action by the absorption of the effused liquid and the formation of adhesions; is it not possible, then, that a similar fortunate termination may occur in the peritonitis excited by the presence of tubercles? I think we have every reason to believe this not infrequently occurs in the form of the disease we are now considering.

In our records different instances are recorded in which all morbid action in the peritoneum had apparently ceased, and in which, along with general adhesions, there were calcareous deposits which could only be attributed to the degeneration of old tubercular matter. A well-marked instance of this occurred in my wards not long since, the patient having died of an acute disorder, by which he had been attacked when apparently in perfect health, but in whom, on post-mortem examination, the meso-colon was found to be greatly thickened and studded over with

calcareous deposits. But we every now and then see persons in whom tubercular peritonitis has been diagnosed, apparently on safe grounds, who nevertheless recover their health. An instance of this occurred in a young man who occasionally still attends the wards that we may watch how he is going on. Eighteen months before he was admitted under me he was in the hospital, and was believed to be suffering from chronic tubercular peritonitis. He recovered and came under my care on account of pleurisy with effusion. On examination a tumour of considerable size could be detected in the abdomen, but he gradually recovered from the pleurisy, although the tumour remained, and can still be readily felt.

But the best evidence we confess of the cure of tubercular peritonitis is derived from operations in which the abdominal cavity has been opened. The earliest case of this kind is recorded by Sir Spencer Wells, who many years ago opened the abdomen in a case which was supposed to be one of ovarian disease, but which proved to be one of tubercular peritonitis. The lady recovered not only from the effects of the operation, but from the disease itself, and was in perfect health many years afterwards. A similar case occurred in this hospital within the last two years in which the patient was operated upon by Dr. Herman and recovered; and other instances of the same kind have been recorded from time to time.

After such evidence there can be no doubt that this form of tubercular peritonitis is susceptible of perfect recovery, but we have scarcely sufficient facts to enable us to determine how often this fortunate termination takes place. One foreign writer quotes a large number of cases in which he believes the inflammation subsided and the patient was restored to health; but as there were no post-mortem examinations to confirm the accuracy of the diagnosis, we ought to receive such reports with caution. My own experience favours the belief that the peritonitis not unfrequently subsides, but in most of these cases the patient is subsequently cut off by a tuberculous affection of the lungs or pleuræ.

(To be concluded.)

ON THE

EXCISION OF BONE IN ORDER TO PROMOTE THE HEALING OF CERTAIN WOUNDS OR ULCERS, OR TO RELIEVE CONTRACTION RESULTING IN CONNEXION WITH THIS PROCESS.[1]

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THE principle of removing portions of bone to promote cicatrisation of the soft parts or to relieve excessive contraction with deformity is not new, but the ordinary works on surgery give no special account of it. My first experience of this procedure was in connexion with the practice of the late Mr. Syme, more than twenty years ago. The case was one of a sore over the prominent part of the heel, which all ordinary treatment failed to cicatrise. Mr. Syme, in order to allow contraction of the surrounding parts, excised a portion of the os calcis, and this was followed by a thorough healing of the ulcer. Since then I have myself treated several cases on a similar principle, and a study of the literature of the subject, as far as I have been able to discover it, shows that there are on record other cases of the same kind, to which I shall presently refer. The exact application of this principle has not been the same in all these cases; and, therefore, for the sake of conciseness, I propose to briefly consider this subject under four different forms of application. The fourth method scarcely comes under the title of this paper; but, as it is intimately associated with the question, I have thought it well to include it.

1. *The removal of a portion of bone not including its entire thickness.*—I have carried out this application of the principle in three cases. Two of them exactly resembled the case of Mr. Syme, and in one of them a second operation was required, as the first removal of bone was not altogether successful. In both, the removal of the portion of bone by means of the gouge and bone forceps was followed by a sound healing of the sores. The third case was one of ulcer situated over the anterior aspect of the tibia, this bone being much thickened as a result of chronic ostitis. Several slices of the thickened bone were sawn off in the longitudinal direction, and this proceeding was successful in assisting the sore to contract and heal.

2. *The excision of a portion of the entire thickness of a bone, or, as in the case of the forearm and leg, of two bones.*—This method is well illustrated by the following case treated by me. A strong, healthy man, aged twenty-two, was admitted into the Royal Infirmary on May 23rd, 1884, having received an injury to his left leg when jumping off a railway waggon. When examined he was found to be suffering from a lacerated wound over the inner and upper part of the leg, with great bruising of the soft tissues for some distance round. The accident was followed by extensive sloughing, and when the dead soft tissues separated, a large sore involving the middle and upper portions of the leg, and extending to two-thirds of their circumference, was left. The bones were not in any way affected. All the usual methods, including skin-grafting, were employed to promote cicatrisation, but the wound never thoroughly healed, and the tense and thin cicatrix gave way at several points from time to time. At the end of six months he was advised to try a change of air, and he attended the infirmary at intervals to report progress. At the end of 1885 he had become so disheartened that he begged me to cut off the limb, with the hope that he would be able to do some work in order to support himself. He was accordingly readmitted on Dec. 14th, 1885. At this time the soft tissues over the whole upper third of the leg and for a short distance up the thigh formed a tense cicatrix involving the greater part of the circumference of the limb. The cicatrix showed several small ulcerations at different points, and the knee-joint was fixed in the straight position. Before resorting to amputation, I proposed to the patient to shorten the bones of the leg with a view to obtaining a complete and permanent healing of the sore. On Jan. 13th, 1886, I made two lateral incisions at a point corresponding to the junctions of the middle and upper thirds of the leg, and having thus exposed the tibia and fibula by raising up the periosteum, I excised two inches and a half of the entire thickness of the former bone and two inches and a quarter of the latter. The ends of the bones were then wired together, and the leg placed in proper splints. The progress of the patient was somewhat slow, and it was not until July 22nd that he was able to leave his bed. At this date a Thomas's thigh splint was applied, and the man took regular exercise with the aid of crutches. The union of the bones was progressing, but was not quite complete. He left the hospital on Sept. 14th, still wearing the splints. Three months after this he returned, when it was found that the union of the bones was perfect, and he was able to bear good weight upon the limb. The sore was soundly healed in its whole extent, but the knee remained stiff. When last seen (more than a year ago) the patient had a strong, soundly healed limb, and was actively engaged at his work.

Dr. Martel[2] of St. Malo appears to have suggested the shortening of the bones of the limbs in cases of extensive destruction of the soft parts, but he did not carry out his idea until June 2nd, 1885, when, in a case of severe compound fracture of the leg with great destruction of the soft parts, he removed fifteen millimetres of the tibia, part of which was necrosed, and a corresponding portion of the fibula. The operation was performed fifty-nine days after the accident, and resulted in complete healing of the sore and union of the bones, but considerable stiffening remained in the ankle-joint. Jasinski[3] records a case in which he excised, with a good result, five centimetres of the tibia and fibula at a point immediately above the malleoli for gangrene following a fracture of the leg, the fractured bone having already united. Dr. Huntington[4] of Sacramento records a case of fracture of the radius and separation of the lower epiphysis of the ulna with considerable laceration of the soft textures, in which he excised primarily two inches and three-eighths of the radius and the same length of the lower end of the ulna, including the separated

[1] Read before the Medical Society of London, Feb. 11th, 1889.

[2] Archives Générales de Médecine, 1886, p. 360.

[3] Gazeta Lekarska for 1886.

[4] Sacramento Medical Times, March, 1887.

epiphysis. This operation was performed on May 1st, 1884, and the parts had united and healed on Aug. 2nd. Owing to accident the radius of the same arm was fractured on two occasions after this, but when examined, about three years after the accident, the hand was sufficiently useful to allow him to carry on his employment. Dr. Hamilton,[5] of Columbus, Ohio, records a case of a recent severe injury to the leg in which he excised about two inches of the tibia and fibula. The bones were not wired, and the patient made a good recovery with two inches' shortening of the limb. Karl Loebker[6] excised a portion of the radius and ulna in order to bring together and suture the nerves and tendons of the forearm, in a case of contracted but healed cicatrix following a transverse wound. The case was not very successful in its results. Dr. E. Kirmisson[7] records a case of severe burn of the forearm, resulting in cicatrisation, but great contraction, so that the arm was flexed on the forearm. In order to relieve this deformity Dr. Kirmisson excised the cicatrix and three centimetres of the radius and ulna a little above the wrist-joint. Non-union of the bones after the operation resulted, and a second operation, consisting of paring the ends of the bones and suturing them, was performed. This was successful, and the patient recovered with a useful hand, but the wrist remained somewhat flexed.

3. *The partial or complete excision of a joint when the sore or contraction involves the soft parts in its neighbourhood.*—I have treated two cases upon this principle. One was a girl aged twelve, whose arm had been severely injured by the wheels of a tramway car one year before she came under my care. There was no injury to the bones, but extensive sloughing of the soft parts around the elbow and for some distance above took place, leaving a large sore. This sore had on one or two occasions nearly cicatrised, but it never healed soundly, and the elbow was fixed in a flexed position owing to the contraction of the cicatrix. On Jan. 17th, 1885, I excised the elbow-joint, removing the bones freely, so that when the portions removed were put together they measured in length three inches and a half. The case progressed favourably, and she left the hospital on March 13th, the joint being movable and the sore almost healed.

The other case was that of a boy, aged nine, who had suffered from a precisely similar accident on Aug. 3rd, 1885. When the sloughs had separated, a large sore surrounding the elbow-joint resulted, and, as it was evident some weeks afterwards that the sore would not heal properly without great contraction and flexion of the elbow-joint, I excised the joint on Sept. 30th of the same year. The boy made a good recovery, with a useful and movable joint and arm.

Mr. Neve[8] reports the case of a girl aged ten, in which he excised the elbow-joint, including three inches of the lower end of the humerus and four inches of the upper ends of the radius and ulna, in order to relieve great contraction and an indolent sore, the result of a severe burn. This patient recovered with a useful limb. Dr. Joseph Bell[9] records a case in which he excised, in June, 1885, three inches of the lower end of the humerus and the olecranon, in order to relieve an extensive sore surrounded by a dense cicatrix caused by sloughing of the soft textures of the arm, following an attack of phlegmonous erysipelas two years previously. The operation resulted in a sound, movable, and useful limb. Dr. Kirmisson,[10] in a short and interesting paper, also records a case in which he excised the ankle-joint, with an excellent result, in order to relieve an ulceration and contraction, with deformity of the foot, caused by a severe burn of the lower part of the leg.

4. *The excision of a portion of the entire thickness of one or other of the bones of the forearm or leg in order to allow the proper approximation of the ends of its companion bone, which has suffered some loss of substance.*—In the *British Medical Journal* of Jan. 9th, 1875, I reported a case in which I (for the first time, I believe) excised on this principle a portion of the ulna in a case of ununited fracture of the radius, with loss of substance. This case was perfectly successful; and I now wish to record another case treated in the same manner but in connexion with the bones of the leg. A man aged thirty-eight was admitted into my wards on Oct. 12th, 1883, suffering from a severe compound comminuted fracture of both bones of the right leg. Some portions of the tibia were loose, and were removed. On Dec. 30th the wound was healed, but the bones were not perfectly united. A plaster-of-Paris bandage was applied, and he left the hospital. He returned at intervals of a few weeks, and had the bandage renewed, as the union of the bones was not complete. He was again admitted on May 1st, 1884, when a careful examination of the leg was made. It was now found that the fibula was firmly united, but not the ends of the tibia, and they were separated for at least an inch. As proper union of the tibia under these circumstances and at this stage of the case was unlikely, I decided to operate. Accordingly, on May 14th, I cut down upon the seat of fracture, divided the fibrous adhesions, sawed off a slice of each end of the tibia so as to raze them, and then excised a portion of the fibula corresponding in length to the interval between the ends of the former bone. The ends of each bone were then wired, and splints applied. Two months afterwards he left the hospital, the wounds being healed, and with some osseous union of the bones. Six months after this the patient was examined, and it was found that firm osseous union had taken place, and the patient was able to bear good weight upon the limb, which was shortened a little more than an inch.

Primary operations, according to these various procedures, will rarely be advisable in cases of great injury to the soft parts, and in the large majority of instances it will be wise to delay operating until the exact extent of the loss of soft parts can be decided, and what the probable prospects of cicatrisation and its results may be. I would only further remark that the experience of my cases and of the other cases recorded is encouraging, and will, I trust, assist in directing more attention to the usefulness of these procedures in suitable cases.

Edinburgh.

[5] Annals of Surgery, vol. v., p. 551. [6] Centralblatt für Chirurgie, 1884.
[7] Reports of French Congress of Surgery, Sept. 3rd, 1888.
[8] THE LANCET, Nov. 1885.
[9] Edin. Med. Jour., Sept. 1885. [10] Loc. cit.

A CASE OF PERNICIOUS ANÆMIA.

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J. B——, aged forty-eight, hat-maker, sought admission into Charing-cross Hospital on March 6th, 1888. As the patient walked into the room I was struck by the peculiar lemon-yellow cachectic pallor he presented. He stated that he suffered from weakness, inability to continue his work, palpitation of the heart, and swelling of the legs. While speaking he would frequently stop and sigh. The lower eyelids were œdematous; the breath sweet and offensive.

The following notes were taken subsequently, when under the charge of Dr. Green:—

March 8th.—There was nothing noteworthy in the family history. The only important point about his previous history was that he noticed he had been getting pale and suffered with palpitation for the last twelve months (probably the commencement of the disease).

General condition.—The cachectic pallor is very marked, the lower eyelids are œdematous, but there is no œdema now of the ankles. He has had no chills or rigors since admission, but he states that he had "shivers" a month ago. The temperature on admission was 99°; it is now 103°. The skin is hot and rather dry. There is no wasting of the subcutaneous fat. The pulse is small, compressible, 100, and not full between the beats. There is visible pulsation of the carotids and in the episternal notch. Heart: Marked epigastric pulsation; there is also visible pulsation in the fourth and fifth spaces; apex beat ¾ in. inside nipple line in fifth space. On auscultation a soft musical systolic murmur is heard at the apex conducted into the axilla, and a hæmic murmur at the base. Microscopical examination shows the corpuscles of the blood to be of large or average size, and of good colour; no increase of white. Estimated by the hæmacytometer, the corpuscles are 1,400,000 per cubic mm. Although the absolute amount of hæmoglobin is greatly diminished relatively to the number of corpuscles, it is normal. The tongue is moist and clean; the breath sweet and offensive; the appetite very poor; no difficulty in deglutition, and no sickness. Liver and spleen normal. The man had complained of defective sight, and ophthalmoscopic examination shows several small hæmorrhages in both eyes; the edges of the discs are a little woolly, and the veins rather full. On admission the urine was normal in quantity, of a much darker colour than natural, and sp. gr. 1018. To-day

it has been twice the normal quantity, of a deep amber colour, and sp. gr. 1009. There is nothing noteworthy about the respiratory system except that the respirations are full and deep, and frequently relieved by long-drawn sighs.

The patient was placed upon a very nourishing diet, which included two eggs, four ounces of brandy, and one pound of raw beef for beef-tea; three minims of liq. arsenicalis were ordered to be taken every four hours after food. He improved rapidly on this treatment, the arsenic being shortly increased to five minims. The anæmia became less marked, and the number of corpuscles increased. The urine passed daily still continued of a high colour, considering the large quantity passed. The temperature was a little above normal, but the pyrexia, which occurred shortly after admission, was not again observed. On March 14th there was a very large deposit of uric acid—more than I have ever seen in any case. The quantity was daily estimated now, and it varied from twenty-five to forty grains, the average being about thirty—that is, rather more than three times the normal. The colour of the urine was also of a very deep orange tint, and the average quantity passed was over 1000 cubic centimetres. On the 24th the red corpuscles had increased to 2,200,000 per cubic millimetre, the hæmoglobin value of the corpuscles being normal. On April 7th the red corpuscles amounted to 2,450,000, and there was marked general improvement in the condition of the patient. On the 9th he was able to get up, but had a little palpitation on attempting to walk. On the 19th diarrhœa and nausea were present, and the arsenic was discontinued. For some days previously to this the uric acid had considerably diminished in quantity.

The patient continued now to improve daily, and on May 24th the blood-corpuscles had steadily increased up to 3,300,000 per cubic millimetre. He was again put upon liq. arsenicalis, but we could never get any greater improvement of his blood. He was therefore, on June 4th, sent to the seaside, and ordered to continue the arsenic; he was obliged, however, to discontinue its use after three days, diarrhœa having recommenced. He was readmitted to the hospital on June 20th in a very bad condition, suffering from diarrhœa, loss of appetite, palpitation, and weakness; stomatitis, herpes at the angles of the mouth, and symmetrical pigmentation on the dorsal aspect of the forearms being new features in the disease. Sneezing, itching of the conjunctiva, with nausea and retching, seemed to point to the toxic effects produced by the arsenic. The diarrhœa was very difficult to check at first—opium, catechu, bismuth, &c., being ineffectual. On June 22nd the patient was a little better; the herpes was now fully developed, and there were two small vesicular swellings beneath the tongue. The throat was sore, the back of the pharynx congested, and the uvula enlarged. The percentage of corpuscles had diminished to one-third of the normal. On the 30th he was again put back upon the liq. arsenicalis for a few days, but on July 5th it was discontinued on account of profuse diarrhœa. From this time onwards the uric acid was found in large quantities in the urine. The soft, feeble, fluttering pulse, the palpitation, the heaving carotids, and the systolic murmur at the apex all pointed to dilated left ventricle from fatty change in the muscle. On July 12th the corpuscles had become reduced to 700,000 per cubic millimetre; size 7μ to 8μ. He had been spitting blood for some days. The urine was not so dark in colour, and there was no deposit of uric acid. The patient now fell into a semi-comatose condition, and on July 28th became quite unconscious, death supervening six hours afterwards.

Necropsy, made eighteen hours after death.—The fat on the abdomen was more than an inch thick, and of canary-yellow colour. There was extreme fatty degeneration of the heart, and its cavities were dilated; weight 15 oz. Weight of liver, 4 lb. 13 oz.; enlarged and fatty, and presenting a very peculiar slate colour on section, evidently the result of post-mortem changes; H_2S had been liberated, which had acted upon the free iron in the organ. The gall bladder contained about an ounce of bile. The lungs showed nothing noteworthy, except a little old pleurisy on the right side. Kidneys fatty. Spleen firm and enlarged; weight 15 oz.; paler on section than usual. The marrow of the tibia was examined, and found to contain fat; to the naked eye it appeared redder than usual. Sections of the liver, after hardening in bichromate of ammonia, were thoroughly washed in water and then placed in a solution of ferrocyanide of potassium; after a very short time they were stained a deep blue. The kidney and heart, treated in the same way, although left in twelve hours, yielded no result. Microscopical examination of the liver sections showed the blue pigment formed by the action of the ferrocyanide on the free iron deposited in and between the liver cells, particularly of the portal zone of the lobule. Sections treated with sulphocyanic acid turned a blood-red colour. I regret that I did not examine at the time the fresh liver to ascertain the percentage of free iron, but an analysis made for me by Mr. Vasey showed that there was nearly twice as much iron in the ash of this hardened liver as in the ash of an equal weight of liver treated in exactly the same way from a case of paraplegia.

The subjoined is a table showing the principal facts connected with the urine for one week:—

	Quantity (in cc.).	Sp. gr.	Colour.	Quant. of nitrogen (per cent.).	Quant. of uric acid (in grms).
March 19th	600	1018	Very dk. sherry	2·0	1·8
,, 20th	1060	1022	,,	2·2	3·2
,, 21st	550	1024	,,	2·4	1·5
,, 22nd	1000	1024	,,	2·4	2·75
,, 23rd	870	1025	,,	2·7	2·8
,, 24th	700	1024	,,	2·7	2·4
,, 25th	945	1026	,,	2·9	1·7

The urine was of a very dark colour, and there was daily during this period a large deposit of cayenne pepper crystals of uric acid. As the patient improved under the arsenic, the uric acid deposit diminished very considerably, and the urine became paler in colour. The uric acid was estimated in the manner described below,[1] and the results only pretend to be approximate; in fact, it would be impossible to estimate it accurately, for much of the urine could not be obtained, owing to the patient suffering from diarrhœa, but I think it may fairly be concluded that the uric acid was three times the normal at least. It will be noticed that the amount of waste nitrogen was high for a patient with a poor appetite.

Dr. Hunter, in a most important article on the subject published in THE LANCET, Oct. 1888, has to my mind very definitely shown that the essential features of pernicious anæmia are *excessive destruction of blood-corpuscles*, the seat of the disintegration being the portal system, more especially that portion of it contained within the liver and spleen. The process seems to commence by a liberation of the hæmoglobin in the spleen, and this is carried to the liver to be disposed of. In another case of pernicious anæmia, of which I have examined the organs for free iron, I found the portal zone of the lobules so crowded with iron that when stained with the ferrocyanide of potash and hydrochloric acid solution the sections appeared as if injected. (These were shown at the Pathological Society.) Dr. Hunter does not mention in his cases whether the urine had been excessively high-coloured, but I notice that Dr. Fagge states that this is usually the case. My opinion is that the hæmoglobin is taken to the liver, and by the action of the cells, particularly in the portal zone, decomposed, to form bilirubin or some other allied pigment, such as hydrobilirubin, the iron being left behind and accumulating as the disease progresses. Cazeneuve has stated that the urobilin is increased in all diseases where there is increased disintegration of the red corpuscles. Urobilin is identical with hydrobilirubin, and very similar to hæmatoidin. All these substances are free from iron. I think these facts, then, bear out strongly Dr. Hunter's views. In this case there was daily a large amount of urobilin lost to the body by the urine, and a large amount of iron stored up in the liver in the free state. It may be that the peculiar lemon colour of the skin and canary-yellow colour of the fat are connected with the excess of urobilin in the blood. Another point of interest was the large amount of uric acid eliminated. Was this in any way connected with the administration of arsenic? I think not; for the uric acid steadily decreased as the patient improved under its administration. The uric acid deposit and the high colour of the urine seemed to go together, so much so that it occurred to me that possibly the uric acid was the waste product of the disintegrated blood corpuscles. In leukæmia and ague we may have excess of this acid. In other forms of anæmia, as chlorosis, the uric acid is small, but in this condition we

[1] A hundred cubic centimetres of the twenty-four hours' urine were taken after vigorously shaking up the whole bulk. To this HCl. was added, and the mixture set aside for twenty-four hours. Two balanced filter papers were then taken. The uric acid was collected in one filter, the other was dipped in the filtrate, and the two dried in a warm chamber. The difference in the weight of the two gave approximate results as to the amount of uric acid in 100 cc

have not a hæmolytic process. I have ventured to take up some considerable space in giving the principal clinical facts of this case, because it seemed to throw some light upon the disease, and to strongly support the conclusions arrived at by Dr. Hunter in his very valuable contribution to our knowledge of this subject.

THE

PHYSIOLOGY AND PATHOLOGY OF SOME OF THE VARIATIONS IN THE HUMAN SKELETON.

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WE have for a long time been hampered in our progress of the study of abnormal conditions by the use of terms to which various observers give different meanings, and which others, again, use to signify conditions which do not resemble one another. The two words to which I would now take objection are *disease* and *inflammation*, both of which are used very indiscriminately. The task of drawing any definite line between what is physiological and what is pathological in the case of the skeleton, and between the changes that are inflammatory and those that are not inflammatory, seems to me to be one of the greatest difficulty. I will attempt to illustrate my point in the following statements of what I believe to be facts, each of which will be discussed under a separate heading.

1. The so-called normal anatomy of each race is dependent for its existence upon a certain fixed relationship between the normal organism and its surroundings. If that normal mechanical relationship, or, in other words, the physiology of the organism, be altered, a corresponding change is produced in its anatomy in order that it may be able to accommodate itself to its surroundings and to perform its novel functions. We understand that each portion of the skeleton, its muscular coverings and appendages, performs a definite physiological function, the character of that function varying not uncommonly at different periods of the lifetime of the individual, in correspondence with changes in its relationship to its surroundings. Take, for example, the brain of the fœtus, which can be subjected to very considerable local or general pressure without suffering any injury. We see how the structure of the skull is adapted to retain the integrity of this organ in its first most important mechanical relationship—namely, to the true pelvis of the mother—as it makes its transit into the outer world. Later, as the brain acquires a much more sensitive structure, the skull-cap is rendered just sufficiently strong and firm to shield the most sensitive organ in the body from such local and general pressure as it is exposed to under average circumstances. In the human subject, that bears to its surroundings the ordinary relationship of adult life, we obtain by these mechanical means a skull of a thickness and texture which we are accustomed to regard as normal. As the mechanical relationship which this portion of the organism bears to its surroundings differs very considerably in the several races of man and quadrumana, we find that in each the amount of thickness and density of the vault of the normal skull varies in proportion as the necessity for such protection exists.

2. If the physiological relationship of the normal organism to its surroundings be altered in such a manner that the brain and its bony case be exposed habitually to the influence of forces other than those which affect and determined its normal structure, we see that the form, texture, and thickness of the skull is altered in order that the skull may perform satisfactorily its new functions or physiology. Such experiments are being continually performed for us owing to the necessity which exists in large communities for the subdivision of labour. If we examine the skulls of those who have been engaged for many years in carrying heavy loads upon the head or upon the back of the head and neck, and compare them with the normal or average skull of the same race, we find that the abnormal forces to which the skull has been exposed have produced changes in its several characters which vary in type and locality with the direction and degree of the forces which have exerted their influence upon it, and also with the age and vigour of the individual.

3. I do not think that anyone would call such a skull diseased, or would assert that the abnormal characters which it presents are the result of chronic inflammation. The influence of the same heavy load that produced the alterations in the skull determines in the other portions of the skeleton through which its weight is transmitted changes whose character and causation are identical with those present in the skull, yet pathologists almost without exception insist on describing the more obvious and local changes in the former as inflammatory and not physiological. Up to a very recent date they were regarded as the product of the disease called rheumatoid arthritis. The changes to which I refer are a general increase in the density of the structure of the bones, and a more marked local increase along the lines of greatest pressure; a compression and induration, or a partial or complete removal of the soft structures intervening between adjacent bones; the formation of large bosses or margins of dense bone in the seats of greatest pressure, where they perform a definite physiological function; a frequent partial or complete ankylosis of adjacent bones, together with the occasional conversion of an amphiarthrodial joint into one of an arthrodial type, &c. It seems to me absurd to argue that, because the bones and the bosses or margins that project from them have acquired a density of structure and a power of resisting pressure which is necessary to them in order that the organism may continue to perform its abnormal functions, and which are enormously in excess of the average or normal, the condition is inflammatory and not physiological. The skeleton of such a labourer is brought into a remarkable and unusual relationship to its surroundings, which entails its habitually and constantly performing certain special functions which are somewhat similar to those performed by the normal subject, but demanding the expenditure of an enormous amount of muscular energy in the support of an immensely heavy load. Similar changes ensue in animals other than man which have to draw or carry heavy loads. Practically it is impossible to pursue any occupation entailing the habitual performance of any sequence of movements or the carrying of any weight without the several portions of the skeleton influenced by it rapidly undergoing distinct and characteristic changes.

4. Let us go one step further in our research, and suppose that the labourer continues to perform his heavy work under disadvantageous circumstances, such as diminished physical energy due to want of sufficient food, exposure, or disease, disproportionately heavy load, &c. We find that, while very extensive ankylosis ensues between certain bones, in other joints, as that of the hip, the organism may be no longer able to render the upper margin of the acetabulum sufficiently dense and strong to support the pressure transmitted to it through the upper surface of the head of the femur. In consequence of this the margin yields, and the head, while itself undergoing changes in form, is gradually displaced further and further upon the dorsum ilii. During the displacement of the head the organism makes continuous vigorous efforts to stay its ascent by the formation of bone above it and in the ligaments. Are we to regard this condition as pathological, and the manner in which the changes have been brought about as inflammatory and not physiological? I maintain that we are not. The organism has placed itself in a very abnormal relationship to its surroundings, which differs very greatly from that which determined and serves to retain unimpaired the normal form of its skeleton; in fact, it has attempted to perform a physiology for which it was structurally unfitted without its several portions undergoing such extensive changes as finally to unfit it for performing perfectly their original functions. These are the changes that are regarded as inflammatory in origin and the product of disease.

5. In the performance of many forms of heavy labour, and not unfrequently as the result of deformity, enormous strain is sustained habitually by certain muscles—as the deltoid, subscapularis, gluteus maximus, psoas, soleus, &c. The presence of this strain determines the extension of bone into the tendinous attachments of these muscles or along the direction of the traction which they exert. I allude to the development of the third trochanter on the femur, to the elongation of the lesser trochanter, to the separate formation of bone in the psoas tendon, to the increase in

breadth of the acromion, to the occasional enlargement of the prominence in the insertion of the deltoid, to the enormous increase in amount of tendon in the several muscles, &c. I mention these conditions to show that they are caused in a definite mechanical manner and to perform an obvious physiological function, and that *their origin is not inflammatory*. They are sometimes, though obviously wrongly, regarded as retrocessions to a preceding type, and arising without any cause, if one could imagine such a possibility.

6. If the relationship of the growing organism to its surroundings be altered so as to prevent it exposing the various portions of its skeleton to the influence of those factors which originally determined and now serve to maintain their normal form and the character of the several muscular and ligamentous tissues, we observe that it is wanting in vigour and that it assumes habitually *attitudes of rest*. This results first in the fixation and subsequently in the exaggeration of these postures, which are simply physiological, the bones, both in their growing lines and in their points of impact, and the ligaments and muscles, undergoing such gradual and progressive changes as finally to render the organism unable to perform functions which were originally normal, but which have become abnormal. I allude to the simple acquired deformities of young life. Have we any right to regard the manner in which this alteration in the mechanism of the organism is brought about as *disease* and the product of *inflammation?* Many of the processes involved in the earlier stages of the development of these deformities are not commonly regarded as inflammatory, but the later changes, such as the destruction of fibrous and articular cartilage and bone, and the eburnation and osteophytic marginal growth from the latter, usually are. These conditions are obviously of necessity normal to their surroundings and physiological in their function.

7. In feeble old age, the form of the skeleton as a whole, as well as the form of many of its constituent parts, undergo remarkable changes. The attitudes in which the body is retained are such postures of rest as are habitually assumed at that period of life, it being the aim of the organism to throw as much strain as possible upon the ligaments and bones, and to make as little use as possible of the enfeebled muscles. These attitudes are almost identical in character and causation with the similar deformities which sometimes appear in young life. Many of the joints are altered in character by the change in the functions which they now have to perform, or, in other words, the several portions of the organism, like the organism itself, have to accommodate their form to an altered relationship to their surroundings. The texture of the bones is rendered rare, and many alter very greatly in form, notably the sacrum, which yields before any bone in the body. Now I do not think that anyone, recognising the obvious manner of its causation, can regard the destruction of the inter-articular fibro-cartilage of the temporo-maxillary articulation, the eminentia articularis, the articular cartilage and subjacent bone of the glenoid cavity and condyle of the jaw as being the product of any inflammatory process. The same applies to the yielding of the sacrum, the destruction of portions of the fibro-cartilages between the vertebræ, the formation of articular cavities in their substance, and many other changes which I have described fully in the Transactions of the Pathological Society (1886).[1]

8. Not very rarely a condition described as mollities ossium develops in feeble old age. The changes presented by the skeleton are the exaggeration of those which I have described as constituting senile degeneration; in fact, it is impossible to draw any sharp line of distinction between the more commonly observed senile change and the more rarely observed malacic alteration of the skeleton. The latter is associated with a deposit of a more or less completely decalcified callus upon the outer surface of the skull, when that structure has become so soft that it is unable to retain the brain securely in position and to shield it from injury. Preceding this deposit upon the outer surface of the vault there is a deposit of a similar material upon the softening lamellæ of the original bone. I do not intend to discuss the causation and pathology of mollities ossium further here, as I have done so in preceding papers,[2] but I have brought forward enough to show that where the organism is by some means being deprived of bone-forming power, whether it be due to an inability on its part to make use of food, or perhaps even to obtain it, as in the feeble old subject, or in the case of its occurring at a comparatively early period of life, when it may be due also to some very considerable strain upon the organism, such as frequent childbirth, prolonged illness, &c., the whole, or nearly the whole, of the bone-forming function of the organism is devoted to securing the most important organ in the body from injury. Are we in this condition to regard the wasting of the long bones, or the softening of the skull, or the deposit of a form of decalcified material in its substance and upon its surface as being inflammatory, or as being other than physiological? I think not.

9. We have a similar condition developed in the young subject when it is not supplied with or is unable to obtain suitable food. The bone-forming capacity of the organism is insufficient to form bone strong enough to perform its normal physiological functions. The organism, in a manner aware of such insufficiency, and in the use of a capacity which I might be allowed to call *tissue instinct*, makes vigorous attempts to remedy it by a rapid and irregular growth of the growing line of cartilage, and by a similar rapid deposit of soft and more or less insufficiently calcified periosteal bone. Though the whole condition of the change in the osseous system indicates a *hurry* of normal physiological changes, yet they all follow simple mechanical and functional lines, and are in such a direction as to tend to fit the organism to bear the ordinary relationship to its surroundings. The long and short bones of the body yield and form curvatures. As the skeleton of the rickety subject acquires a normal density of structure with advancing age, which it is enabled to do by the fact that as time goes on the difficulty of obtaining suitable nutriment becomes less conspicuous, the excessive thickening of the skull, being no longer requisite to shelter or retain the brain in its normal form, disappears, though the organism is unable to part with the bone which had been deposited along the concavities of the long bones to strengthen their curvatures. The deformity produced by the curvature is to a considerable extent diminished by the removal of bone from the convex surface of the shaft, and by the further deposition of new bone upon the concavity.[3] To how much of the condition of the skeleton which we describe as rickets, and to which of its stages, are we justified in applying the term *inflammation* as a factor in their causation? and, if we do apply it, what do we mean by it? To assert that in mollities ossium, as in rickets, the vault of the skull is thickened, because it is formed in membrane and not laid down primarily in cartilage, is begging the question and not explaining the causation of the hypertrophy.

10. Lastly, we come to the most difficult problem of the lot, and that is osteitis deformans. It was supposed that only certain bones of the skeleton exhibited the changes that characterise this abnomal condition; but I have been able to satisfy myself, by careful dissection of well-marked examples, that, like rickets, it is a condition that affects every bone in the body; that the changes, such as the thickening and sclerosis, are, as in rickets, mollities ossium, and labour conditions, most marked where it is necessary that they should be, or, in other words, where the necessity for their existence arises. The mechanical aspect of osteitis deformans, like that of rickets, is an inability of the osseous system to bear its normal relationship to its surroundings; and the organism, by the exercise of its tissue instinct, attempts to obviate this progressive insufficiency by the abundant and rapid deposit of new material, the mode and locality of its deposition being based on the principle of demand and supply. It differs from rickets in that the former condition is a progressive one and is not recoverable, while in the latter such thickenings as are no longer requisite for the maintenance of a satisfactory relationship between the organism and its surroundings disappear. Exactly the same mechanical factors determine and control the progress of osteitis deformans as do that of the skeleton, whether normal or displaying senile, malacic, or rachitic changes, the similarity to the last condition being perhaps the most obvious.

[1] The Causation and Pathology of the so-called Disease "Rheumatoid Arthritis," and of Senile Changes.

[2] Mollities Ossium, Rheumatoid Arthritis, and Charcot's Disease (Trans. Path. Soc., 1885). The Factors which determine the Hypertrophy of the Skull in Mollities Ossium, Rickets, Osteitis Deformans, and Congenital Syphilis (THE LANCET, April 28th, 1888, p. 815). An important Factor in the Causation of some of the Deformities which develop in Rickets, Mollities Ossium, and Osteitis Deformans (Journal of Anatomy and Physiology, 1887).

[3] The Anatomy, Pathology, and Physiology of the Deformities that Develop in Young Life. (Guy's Hospital Reports 1887.)

DISCREPANCY IN PRINT

If we are to regard osteitis deformans as a sarcomatosis, we must remember that it affects the whole of the osseous system, and that the laws that govern its growth and determine its most obvious characters, and to which the skeleton reacts, are identical with those that govern the growth of the normal skeleton, so that it must form a very remarkable exception to the mode of extension of sarcomatous tumours generally. Is osteitis deformans a universal inflammation of the osseous system? If so, its form is not exactly that of rickets or of mollities ossium. If we look upon the thickening of the skull in osteitis deformans as being the result of inflammation, I think that we must also regard the similar condition of the skull in mollities ossium and rickets as being also inflammatory. Again, if the thickening of the skull in mollities is inflammatory, must we not consider the rarefaction of the long bones of the extremities and the bones of the trunk as being also inflammatory? To answer the last question in the affirmative seems to be to assume a conclusion for which we have not sufficient grounds.

IS "GENERAL PARALYSIS OF THE INSANE" NECESSARILY AN ANOMALOUS AND HOPELESS DISEASE?

BY J. D. MORTIMER, M.R.C.S.,
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DR. HANDFORD'S article on certain atypical cases of general paralysis[1] has encouraged me to record my difficulties in accepting the axioms which have been laid down in regard to this disease, and the somewhat unorthodox conclusions at which I have consequently arrived.

General paralysis has on high authority been defined as an anomalous and inevitably fatal disease; and, indeed, from the way in which it has even lately been spoken of, one might almost suppose it to depend on some virus as definite as the bacillus anthracis. I cannot find, however, from a study of the literature of the subject, and from my own observation, that the requisite positive proof of such assertions has ever been satisfactorily afforded. Post mortem, the macroscopical and microscopical appearances are such as might result from ordinary morbid processes, modified (as they are everywhere) by the normal constitution of the affected part. Although remarkable and often characteristic, I do not know of one that may be called pathognomonic.

The prognosis in general paralysis is so dependent on its possible affinity with acute cerebral affections otherwise named, that the two questions may be considered together. In the central nervous system the symptoms attending "functional" disorders may closely resemble those of downright inflammation and degeneration, from which, indeed, these states probably differ only in degree. As a result of acute fevers &c., hyperkinesis and ankle-clonus may for a time be as well marked as in lateral sclerosis, or absent knee-jerk as in locomotor ataxy.[2] Between early general paralysis and early intoxication the likeness, pointed out specially by Dr. Wilks, is so well known that I need only recall it. The effect of hasheesh has been thus described: "After a few minutes I seemed to become two persons; I was conscious of my real self reclining on a lounge, and why I was there; my double was in a vast building made of gold and marble, splendidly brilliant and beautiful beyond all description. On another occasion my double seemed to be a sea, bright, and tossing as the wind blew; then a continent. I lost all conception of time. I arose to open a door; this seemed to be a million years.....I felt an unusual fulness of mental impressions. I understood clairvoyance, hypnotism, and all else. My thoughts flew with enormous rapidity." So after taking opium or inhaling chloroform. We may suppose that, in Dr. Hughlings Jackson's language, there is in all these states a temporary dissolution at the highest level with super-activity below. But after prolonged disturbance a return to the normal may occur, as in ordinary "mania," without physical symptoms. It now and then happens, however, that such cases lapse into general paralysis. Again, a more or less permanent recovery may take place after a disorder, not only prolonged, but extending to lower levels, as in the following cases:—

1. A big man, aged thirty-two; much alcoholic and sexual excess. Boisterous excitement, varied by emotional depression. Says repeatedly that his brother has millions, and he himself can have as much as he likes. Pupils equal; knee-jerk brisk; tongue tremulous; slight slurring of syllables. He recovered in six months, and has had no relapse (two years).

2. A temperate man, aged forty-five; hard worker and keen politician. Stupor, with slight indications of general paralysis. Well in six months and returned to work. Readmitted "a typical general paralytic" three months later. Died, worn out, after a few weeks' intense excitement.

3. A man aged thirty-eight; irregular life and recent domestic calamity. Extremely ill; large syphilitic ulcers; sordes; tongue raw and tremulous; pupils unequal. Sleepless and restless, shouting that he is worth millions, the greatest man in the world, &c. In two months there was general improvement; no delusions, slight emotional depression; still tremor and unequal pupils; retinæ healthy. Discharged in four months, being quite rational and intelligent; knee-jerks a little brisk; no tremor or inequality the last six weeks.

Amongst other similar cases, a remarkable one is that of a man aged thirty-one, who, after some eccentricities, became maniacal, with much emotional exaltation, extravagant boasting, letter-writing to the Queen, masturbation, self-decoration with trumpery, &c. As this subsided (after close on two years) he became taciturn and hypochondriacal with loss of expression, thickness of articulation, fibrillar tremor, and incapacity for exertion. These threatening symptoms gradually vanished, and since (nearly three years) he has been in constant and responsible employment.

These disorders seem to form a series in which the prospect of recovery partly depends, as in other organs, on the intensity and persistency of the irritation, and the consequent amount of structural change, as well as the constitutional state. It must be remembered that in the cerebral cortex morbid processes are peculiarly modified by anatomical conditions, by extreme instability, and by intricate connexions with the rest of the system. There are many diseases which are apt to have more serious results when occurring for the first time after adolescence; and the changes which have taken place in the brain of even a healthy adult may have much to do in determining the usual progressive degeneration. Nor does speedy relapse after apparently complete recovery seem so remarkable when we consider that not only do all predisposing causes remain as before, but that in very few instances can the brain be guarded like a recently inflamed lung or sprained ankle. Indeed, the unlucky convalescent is in most cases beset as soon as he leaves the asylum by domestic and business worries, temptations to excess, and all the other disturbing influences of modern civilised life.

Even if the possibility of some specific process be admitted, it does not follow that in general paralysis recovery is altogether out of the question. The same has been said of such a specific disorder as acute tuberculosis, but there is good evidence to show that this is not the case.[3] In the present state of our knowledge, however, may not the phenomena be at least fairly well accounted for upon general considerations, without recourse to a hypothesis difficult to reconcile with ordinary rules of pathology? I cannot help thinking that we have here an instance of that unfortunate property which names and definitions seem to possess, of causing endless confusion and futile discussion. "General paralysis" was probably originally used merely as a clinical term, and applied to those later stages in which there is obvious, general, and permanent muscular affection. As it was found that such a condition was often preceded by acute brain disorder, the term would be extended to include the whole series of events. Next arises the theory that general paralysis is a hopeless disease, and that no case which permanently recovers is pathologically akin to true general paralysis, however close the resemblance up to a certain stage. Arrest of general paralysis cannot, of course, be expected when such progress has been made as to interfere with general

[1] THE LANCET, Dec. 15th, 1888.

[2] Angel Money, Brit. Med. Jour., Oct. 29th, 1887. Bristowe, ibid., Feb. 4th, 1888.

[3] Westminster Hosp. Reports, vol. I.; Erichsen's Surgery, vol. II., 1888.

nutrition, although even then marked improvement may occur. In early stages, however, there may be no appreciable change for months or even years, especially where there is no continuous excitement. There are, too, eccentric people outside asylums, whose behaviour certainly suggests that they have travelled a few steps on the road, and there halted.

Cases showing transitions between typical general paralysis and typical cord disease are by no means rare both in and out of asylums. For illustrations I would refer to Dr. Handford's article, and also to one by Dr. Bristowe.[4] Such cases are often of long duration, and the mental symptoms may be very slight, there being only apathy and self-complacency, and, later on, emotional dementia in a mild degree. Affinities may also be traced between general paralysis and some cases of acute mania or melancholia, having a fatal termination. Where there is much excitement, as Dr. Mickle remarks,[5] somatic signs may be temporarily masked, only showing on its subsidence. But there may be death from exhaustion before this occurs. The connexion between syphilis and general paralysis was discussed by Dr. Savage at the Washington Congress in 1887, and in his address[6] are details of many cases of general paralysis in syphilitic subjects, either following the usual course or combined with more localised and specific lesions. Between simple general paralysis and senile paralysis and insanity the boundary is even more indefinite—I might say non-existent.[7] General paralysis is, in fact, often a localised premature senility, setting in without any definite exciting cause, and, it may be, without any signs of initial over-action. I need hardly say that the prognosis in such cases is extremely bad. It would not be difficult to trace analogies between general paralysis and other forms of brain and cord disease, besides those referred to, even where at first sight very little resemblance can be seen. But I do not want to weaken my argument by speculation that may be termed fanciful.

For some time past teachers of general pathology have insisted more and more that the processes we call growth, inflammation, degeneration, &c., are not only closely allied, but absolutely inseparable. The repair of a fractured bone, for instance, is now described in language very different from that of ten years ago. In accounts of named diseases, however, one finds that far more space is devoted to differential diagnosis than to consideration of affinities, even in regard to those due less to specific irritants than to general causes and innate tendencies. But, to quote Mr. Jonathan Hutchinson,[8] "Pathology knows no Melchisedecs, and if we would rightly understand the nature and origin of the various and often very peculiar maladies which come under our observation, we shall succeed better by seeking for relationships than for differences. In all probability no malady is really isolated." I may point out that in trying to follow this advice, it is of first importance to ignore *pro tem.* those non-essential or remote effects which are often, in disorder of a highly specialised tissue, out of all proportion to the pathological basis.

To sum up, I submit that acute disorders of the central nervous system, not essentially different from one another, may be induced by a variety of causes, toxic and otherwise, acting singly or in combination; and in subjects so predisposed by age, sex, general constitution, &c., these are apt to be associated with progressive and general degeneration. The latter may also occur as a primary change. The term "general paralysis" may be conveniently used to denote the condition it literally signifies, but not to imply that there is an isolated and specific disease so named. Recovery or indefinitely prolonged arrest in "early general paralysis" is unlikely, but there is no reason for an arbitrary denial of its possibility. I know only too well that the controversy is an ancient one, and that little originality can be claimed for much that I have written. The problem is, however, one that alters as our knowledge of general pathology increases, and is really one of practical and universal importance, but is yet one that has hitherto been chiefly discussed in publications seldom seen by many practitioners. I trust these considerations may furnish some apology for my contribution.

Portsmouth.

[4] Brit. Med. Jour., Jan. 1st, 1887.
[5] General Paralysis of the Insane, second edition.
[6] American Journal of Insanity, Oct. 1887, and Jan. 1888.
[7] Vide Dr. Savage's Presidential Address, Med. Psych. Assoc., 1886.
[8] Harveian Lectures, Dec. 1887.

A CASE OF

SUPPRESSION OF URINE TREATED BY REMOVAL OF AN IMPACTED CALCULUS FROM THE URETER BY OPERATION.

BY F. W. KIRKHAM.

ON May 24th, 1888, I was called to a case of suppression of urine. The patient was a farmer, fifty-eight years of age. Six years previously he had suffered from renal colic of the right side. After this attack he passed a small calculus. About a year after this he again suffered in a similar manner, the pain being felt most acutely on the right side. The attack lasted about twenty-four hours, when the pain suddenly ceased. On the day I first saw him (May 24th) he was attacked, early in the morning, with severe pain running downwards from the left loin to the testicle. The pain commenced about 8 A.M. He had micturated about half an hour before the pain commenced, but from the onset of the pain no more urine was passed. The pain, which was very severe, lasted for about an hour, when it gradually became less acute, and finally ceased; and, from his experience of the former attack, he thought that the stone had passed into the bladder. Being then quite easy and free from pain, he went about his daily duties as usual, but was very much surprised to find, on attempting to micturate before retiring to rest, that he was wholly unable to void any urine, nor did he feel a desire to do so. Being somewhat alarmed at this, he sent for me, and I first saw him at 10 o'clock in the evening. He then appeared perfectly free from pain, but was very anxious about the suppression of urine. I passed a catheter into the bladder, but found it empty. I ordered a hot bath, and prescribed fifteen minims of tincture of opium to be taken every four hours. On the next day I found that he had still passed no urine, and he continued in this state, passing no urine and suffering no pain or inconvenience, till the 27th, when he commenced to complain of feeling weary and weak. During this period I administered hypodermic injections of pilocarpine every day, which produced profuse diaphoresis. He continued to take a fair amount of light food with evident relish, and his bowels were relieved on the 26th and 27th, the motions being firm. On the 30th his appetite failed, and he complained of headache and drowsiness with a feeling of great prostration and of muscular twitchings, and he voluntarily took to his bed, which up to that time he had not done.

After considering the previous history of the case, I concluded that the right ureter had been obstructed by the former attack, that the right kidney was thus rendered useless, and that the left ureter was now also blocked by the recent impaction in it of a calculus. Despairing of his recovery, I told my patient of the opinion I had formed of his case, and felt compelled to give a very gloomy prognosis. I then requested him to allow me to cut down upon the ureter, in the hope that, if I should not be fortunate enough to be able to remove the calculus, I might possibly save his life by making an incision into the pelvis of the kidney to procure an outlet for the urine. This he readily gave me his permission to do, and accordingly at 1 P.M. on May 30th ether was administered, and an incision was made from the tip of the last rib towards the anterior superior iliac spine. The integuments, muscles, and fascia were carefully divided, and the kidney at length exposed. After carefully exploring the kidney, and finding no stone therein, the exploration was continued downwards along the ureter, in which a stone was distinctly felt about half an inch above where the ureter crosses the commencement of the external iliac artery. There was a little difficulty in reaching the ureter easily in this part of its course, but after slightly enlarging the wound I ultimately succeeded in cutting into and extracting from the ureter a calculus about the size of a large date-stone. A little urine escaped from the incision, but the amount was, as far as I could judge, very small. The hæmorrhage also was slight. A large drainage tube was introduced into the wound, the edges of which were held together by sutures, and a thick layer of iodoform wool was retained over it by a bandage. Half an hour after the operation an ounce and a half of urine was passed naturally;

afterwards at frequent intervals small quantities were passed, and during the first twenty-four hours after the operation twenty-six ounces of blood-stained urine were voided. On June 1st forty ounces were passed, and it ceased to be blood-stained. From this date he progressed most satisfactorily, and by July 10th the wound had quite healed, and he was enabled to resume his occupation.

Downham Market.

NOTES OF

TWO CASES OF EXCISION OF THE ASTRAGALUS IN CLUB-FOOT.

By J. CRAWFORD RENTON, M.D.,

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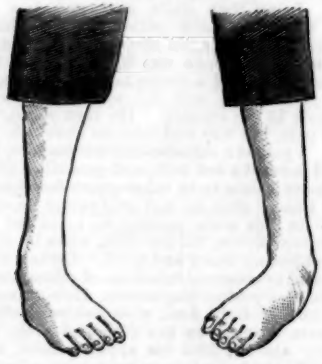
D. R——, aged seven, was admitted to the Training Home for Nurses on Nov. 28th, 1886, suffering from relapsed double talipes equino-varus of a severe form, as is well illustrated in Fig. 1. I had previously operated on the child when an infant, and the result at that time appeared quite satisfactory. The case now presented features so severe

FIG. 1.



that it was quite evident some radical operation must be attempted. The left foot being the worse, I decided to remove the astragalus from it, and this I did on Nov. 24th, 1886, assisted by Drs. Beatson and Somerville, using a single incision from the external malleolus downwards and forwards, as is advised by Professor Lund. The foot was

FIG. 2.

placed in a box-splint, and progressed favourably, the deformity being corrected. As the right foot was not so deformed as the left, I performed Phelps' operation on it, dividing all the resisting structures in the sole of the foot from without inwards, skin included. The foot could now be easily put at a right angle with the leg, and healed without any trouble and with a single dressing. It is now two years since the feet were operated on, and the boy continues to keep well and is able to run and play the same as his companions. Fig 2 shows the present condition of his feet.

S. M——, aged two years and a half, was admitted to the Western Infirmary in August, 1887, with severe double talipes equino-varus. Several operations had been performed in this case, but without good result, and the deformity was greater than in Fig. 1, so that I determined to excise the astragalus from both feet. This I did, leaving an interval of ten days between the two operations. The feet were placed in rectangular tin splints, and healed without any trouble. Fig. 3 represents the child's feet eighteen months after operation.

FIG. 3.

Recently I have used Mr. Lund's astragalus hooks, and find them most serviceable in effecting easy excision of the bone.

The above cases show no tendency to relapse, and may now be regarded as tributes to the value of the operation of excision of the astragalus in severe club-foot.

Glasgow.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF SCLEREMA NEONATORUM SUCCESSFULLY TREATED BY MERCURIAL INUNCTION.

By ANGEL MONEY, M.D.

A FEMALE CHILD aged five weeks was brought to me on Nov. 6th, 1888. She was under the care of Dr. Scott of Bath. At birth there was noticed a patch of hard skin on the right shoulder about the posterior axillary fold, and another in the skin of the left parotid region. The skin was hardened all over the back of the body, including the buttocks, shoulders, legs, and neck, and there was a pentagonal area of the same induration, and about an area an inch square in the left parotid region. The thin skin on the front of the face, neck, trunk, and limbs was supple and soft. The induration was of the most marked kind, and suggested calcification—myositis ossificans; but the skin was the part affected. The muscles were splendidly developed, free movement being permitted in most directions. The palms and soles were not affected. The plantar reflexes were perfect, and the knee-jerks were readily obtained. The knee-jerks are usually more ready during the first months of life than at any other period of (healthy) existence. The induration was quite symmetrical. The liver could not be felt below the costal margin, but the spleen extended three fingers' breadth below it on the left side of the abdomen. There was much sweating about the head; the urine was pale and clear, and did not stain or stiffen the napkin. The temperature was 99·2° in the rectum. The cry was lusty; the pulse and heart sound, and beating 100 times in the minute. There was no facial irritability, no cranio-tabes, and no jaundice; but much dark-brown hair existed on the scalp and on the back. The infant had been four weeks solely at the breast, and one week on lime-water and milk. I prescribed frictions over the indurated area with sweet oil, plenty of warmth, and careful feeding with fresh cow's milk and barley-water, together with inunction of blue ointment every day into the skin of the abdomen. From this time onward there commenced a rapid recovery; whereas prior to the prescription of blue ointment the induration had steadily advanced, notwithstanding frictions and warmth. It was the size of the spleen that induced me to prescribe the blue ointment, and the consideration enforced by some, but not by myself, that congenital syphilis produces a hairy scalp. The child was the first of the family, and had been preceded by no miscarriages. Careful questions and an inspection of

the father revealed no evidence of syphilis. Neither do I regard the improvement under mercury as certain evidence of a syphilitic origin. On Nov. 18th the report was: "The hardness behind the arms is softening; on one a division has taken place; whilst across the back over the shoulders the skin has become flexible and will wrinkle easily; from the shoulders to the buttock the skin has assumed a more healthy appearance, and wrinkles on rubbing, the hard lumps having decreased; on each side of the buttock it has considerably softened, and on one thigh the hardness bears signs of dividing. The child has free use of its limbs, is very healthy, cries and suckles very strongly, and, beyond having the white mouth lightly, appears well." On Dec. 29th Dr. Scott wrote "that the only remaining hardness was a piece the size of a pea in the left parotid region, and another the size of a sixpence in the right deltoid region. The back and the buttocks are now normal, the child looks extremely healthy, and has never wasted."

Cases of recovery from sclerema neonatorum have been recorded by Dr. T. Barlow[1] and myself,[2] but the rate of restoration of the health of the skin was very much slower than in the case now recorded. The importance of the case lies on the surface.

PRIMARY SCIRRHUS OF SKIN.

By F. H. WEEKES, F.R.C.S. Eng.

THE occurrence of a spheroidal-celled carcinoma as a primary growth in the skin is, I think, sufficiently rare to justify me in submitting notes of a case.

In January, 1887, a man aged fifty-two came to me with a lump the size of a hazel nut at the junction of his nose and forehead. This was very hard, and was connected with the skin, but not with the subjacent bone. It had been noticed for about three months, during which time it had slowly increased in size. There had been no injury to the forehead; and I was unable to find any history of cancer in the patient's family. The skin over the tumour was thickened, but in other respects seemed normal. There were no swellings to be detected in any other part of the body. The lungs, liver, and lymphatic glands appeared to be healthy. At the end of the same month, with the help of cocaine, I excised the growth, some sections of which gave the appearance of scirrhus. The wound soon healed up, but four months afterwards the patient came back to me with a recurrence of the growth in the scar of the wound. In the following May I placed the man under ether, and removed the tumour freely, with plenty of the surrounding skin. Again the wound soon healed up. At the present time (fourteen months since the last removal) there has been no recurrence of the growth locally. Under the microscope sections show a portion of skin the deeper parts of which are infiltrated by a new growth. The squamous epithelium on the surface is normal, and does not dip down into subcutaneous tissues, and there are no bird-nests to be found. The hair follicles and the sweat and sebaceous glands show proliferation of their epithelium. The central portions of the tumour exhibit masses of epithelial cells packed in spaces bounded by fibrous tissues; between the individual cells there is no stroma. This is, of course, the ordinary structure of scirrhus; and as there is no other growth of a similar nature in the body, I suppose it may fairly be called a primary scirrhus of skin.

York.

CASE OF TRANSFUSION OF THE NORMAL SALINE SOLUTION.

By WALTER HENRY BROWN, F.R.C.S.I.,
ASSISTANT SURGEON, LEEDS GENERAL INFIRMARY.

I WAS first called to see Mrs. H——, aged forty-seven, on Dec. 26th, 1888. I found her in a condition of extreme exhaustion, surface cold, lips pale, pupils dilated, pulse 140, and barely to be felt at the wrist; the history of the case being that for the past eighteen months she had bled continuously from the vagina. On examination I found a large polypus filling up the vagina, and having a very broad attachment. Her condition was such that the mere digital examination produced an increase of depression, and I thought she was dying. For some hours prior to my seeing her she had vomited continuously. Under the circumstances I felt that to attempt to deal with the polypus then would be fatal. I therefore procured an Aveling's transfusion apparatus and injected twenty-five ounces of the normal saline solution into the median cephalic vein, with the result that in a few minutes she rallied, the pulse became perceptible, and her aspect improved. After two hours she swallowed and retained a little milk-and-egg mixture. Three days afterwards she had so far recovered that I was enabled to remove the polypus. Her convalescence has been very slow; but she is now gaining strength more rapidly, is able to be up the greater part of the day, takes food well, and is no longer in need of treatment.

Remarks.—I have purposely avoided recounting any details as to daily progress &c., because my object in relating this case has been merely to place on record the result of the transfusion. I have on five previous occasions transfused, each time using human blood in quantity varying from six to twelve ounces, and the result has proved unsatisfactory. The normal saline fluid answered so well in this instance that its employment would seem to me to be indicated in all cases where the operation of transfusion is called for, as a supply can be so readily obtained.

Leeds.

[1] "Clinical Transactions." [2] "Treatment of Disease in Children."

ENCHONDROMATOUS GROWTH OF FORTY YEARS STANDING IN A FEMALE AGED NINETY.

By C. H. WELCH, F.R.C.S. &c.

E. H——, a widow aged ninety, came under my care four years since with an enchondromatous growth on the right cheek, which, she informs me, commenced over forty years ago. Soon after I first saw the case, in consequence of the great pain, caused probably by the pressure on the facial nerves, an opening about two inches long was made at the apex and a quantity of broken-down structure removed, after which much relief was obtained. The opening never healed, and the growth steadily increased to its present size, now probably being 4lb. or 5lb, in weight

and measuring 16 in. by 13½ in., and about six times as large as when I first saw it. At the commencement a small pimple was observed on the cheek, half an inch in front of the tragus. Possibly the tumour originated over some portion of Steno's duct, which may have had some defect in it. Occasionally a discharge of a purulent character comes into the mouth, and at times there is excruciating pain in the head, and an offensive sanious discharge continues to ooze from the tumour. The health is in other respects good, the intellect clear, and the memory excellent. No satisfactory reason was given for not seeking relief in the earlier stages of its growth. The accompanying engraving is a copy of the photograph recently taken.

Brighton.

FOOTBALL FATALITY.—Whilst playing in a match at Park Avenue, on the 5th inst., against Saltaire, in the Bradford Charity Cup tie, Lister Wade was violently charged by two opponents, and sustained concussion of the brain; death supervened on the following Friday.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

FOUR CASES OF HYDATID CYSTS OF THE LIVER, WITH REMARKS.

(Under the care of Mr. HENRY MORRIS.)

IN our last issue[1] we published two of these cases, and in our editorial remarks drew attention to the period at which the operation may be undertaken, quoted some of the authorities in favour of early interference, and mentioned the modes of treatment recommended to be employed in the first instance, when the cyst appears to be solitary (as it usually is) in the liver, and suppuration has not occurred. The cases already brought forward are: 1. Female, aged twenty-one, in whom aspiration failed to cure, so the cyst was incised and drained. Three years afterwards recurrence took place, and the patient recovered after incision and drainage. 2. Female, aged thirty-six; had tumour the size of an orange; treated by incision and drainage. Recurrence took place two and a half years afterwards, when incision with drainage was successfully repeated. The operations by means of which these cysts are evacuated after incision have been much discussed during recent years.[2] Some have advocated the formation of adhesions between the surface of the cyst and the abdominal parietes as the first stage of the operation. Simon of Heidelberg recommended multiple punctures with this object, but the result was not satisfactory, as fluid escaped into the peritoneum, and in one instance death followed. Bardeleben[3] applied Vienna paste over the cyst, until it had extended through the abdominal wall down into the cyst; this was a painful procedure, and lasted some six to nine days. He had employed this method in forty cases without a death. Barwell[4] recommends that the operation be performed in two stages—the cyst wall or hepatic substance to be sutured to the edges of the incision, and in three or four days the cyst incised and emptied. Ranke's method consists of incision through the parietes and the removal of two semilunar pieces of the wall to make the wound gape; the cyst to be incised in a week or two when the substance is insensitive. In 1883, incision, evacuation, and drainage at one operation were recommended. Of this method Mr. Morris's cases afford good examples. The operator must guard against the escape of fluid into the peritoneum, suture the liver wound to the parietal opening with accuracy, and employ strict antiseptics. This method of operating has been very successful. A plan of emptying these cysts still occasionally employed, alluded to by Mr. Morris in his remarks, is to introduce a large trocar and cannula into the cyst, and then to pass catheters through the cannula, leaving them *in situ* after removal of the latter, increasing the size of the catheters as the opening enlarges by ulceration. Through these frequent irrigation is employed, and the contents of the cyst washed out. Extensive suppuration usually follows with its attendant risks. Case 4 is an example of the difficulty met with in diagnosing some abdominal cysts. The form of growth most likely to be mistaken is the parovarian cyst, which on tapping may yield a fluid similar to that obtained from hydatids. Of low specific gravity, containing a large quantity of chlorides, and without albumen, it may resemble the hydatid fluid also in its appearance. Microscopic examination should therefore be made in all cases.

CASE 3. *Aspiration, incision, and drainage; recovery.*—The patient, a rather ill-nourished, dark-complexioned woman, aged thirty-one, was admitted on June 4th, 1885, with an obvious fulness of the left side and front of the abdomen below the costal arch. In this situation a smooth, rounded, fluctuating swelling could be felt, which passed upwards beneath the ribs. This swelling moved with the diaphragm in forced respiration, and it extended upwards nearly to the nipple. There was dulness over the whole of this area, whose lateral boundaries were the edge of the sternum and the mid-axillary line. Over this area there was complete absence of cardiac and lung sounds. The heart was displaced upwards, and its apex could be felt beating above the tumour, in the third interspace internal to the nipple line. She complained of palpitation and shortness of breath.

The patient said that she first noticed the swelling beneath the left costal arch four years before admission. It had not increased much in this direction since. Her previous health had been good, having had no serious illness since youth. She was married at thirty-one; never pregnant; catamenia regular. She had latterly been subject to palpitation of heart and dyspnœal attacks of increasing severity.

On June 16th the tumour was aspirated over the projecting part below the left costal margin, and fifty-one ounces of clear watery fluid removed, of sp. gr. 1005, non-albuminous. No hooklets were found on microscopical examination. This procedure was repeated once, and gave great relief. She left the hospital about a month later.

On Oct. 3rd she was readmitted, much in the same condition as before aspiration. On Oct. 13th laparotomy was performed by an oblique incision over the tumour just below and parallel to the ninth (left) costal cartilage. The cyst wall was exposed and incised, and twenty-five ounces of fluid, with numerous daughter cysts, evacuated. The cyst wall was stitched to the edges of the wound, and a large indiarubber drainage tube inserted. The operation was followed by very little febrile disturbance; and the temperature resumed a normal course on the tenth day. A small abscess subsequently formed at the lower part of the wound. By the end of October these were quite well, and the discharge from the sinus was comparatively slight. She left convalescent on Dec. 3rd, with the small sinus still open.

CASE 4. *Very large tumour simulating ovarian cyst; excision; death from peritonitis.*—The patient, a moderately nourished woman, aged thirty-four, was admitted on May 27th, 1885, under Dr. Powell, complaining of abdominal tumour and pain in the left hypochondriac region. The whole abdomen was greatly and uniformly distended, the circumference at the umbilicus being thirty-eight inches. There was dulness on percussion over the whole of the front of the abdomen from the pubes to the epigastric region, and fluctuation over this area. Both loins were resonant. The dulness did not alter when the patient's position was changed. This upper limit of the liver dulness was normal. The tumour was taken to be an ovarian cyst. It was tender all over.

The patient stated that she had noticed gradually increasing abdominal enlargement during the previous nine months. Two years before admission she was tapped, on the supposition it was an ovarian tumour. She had been married several years, but had never been pregnant. The catamenia ceased nine months ago; it had previously been regular.

On June 26th laparotomy was performed by an incision three inches long through the linea alba, between the umbilicus and pubes. This subsequently had to be prolonged upwards above the umbilicus, so that its total length was eight inches. An enormous cyst was thus exposed, filling the whole abdomen from the diaphragm to the pelvis, into which its lower end was jammed. It was firmly and universally adherent to the abdominal wall and surrounding structures. The cyst wall was very thin. It was tapped, and 184 oz. of puriform fluid evacuated, with a quantity of gelatinous substance. Below, the cyst was adherent to the back of the uterus and the pelvic walls; above, it sprang from the right lobe of the liver. The whole of the cyst wall was removed, except that connected with the liver, which was gathered into a tubular shape and stitched to the upper part of the abdominal wound. A drainage tube was inserted into this part of the cyst. In removing the cyst wall from the pelvis many ligatures were required. The peritoneal cavity was carefully cleansed, and the wound united with superficial and deep sutures. It was dressed with iodoform powder and boric charpie. The operation lasted

[1] Vol. i., p. 477. [2] See Greig Smith: Abdominal Operations. [3] Congress of German Surgeons, 1877. [4] Medico-Chirurgical Society, 1887.

two hours. She suffered much from vomiting after the operation, until she died of peritonitis on the seventh day. There was no post-mortem examination.

Remarks by Mr. MORRIS.—My experience of the surgical treatment of diseases of the liver has had reference to hydatid cysts, the abscesses which result from suppuration of hydatid cysts, idiopathic abscesses of the liver, and the abscesses which arise outside but in contact with the liver. Several years ago the practice adopted almost as routine was to tap the tumour with a large trocar and cannula, afterwards introducing a piece of drain tube through the cannula. But more recently this has been given up. During little more than twelve months I had to treat seven cases of hydatid disease of the liver. Of these seven cases, five were in women, two in men. Two cases were cured by simple tapping with the aspirator. In one case, in which two separate cysts were diagnosed, one of the cysts was cured by tapping and the other by free incision after suppuration. In two cases in which repeated tappings failed, the cases were cured by incision; and two were treated by incision without any attempt to cure by tapping. Six of the patients recovered perfectly and easily; the seventh, a case of altogether exceptional character and severity, died (Case 4). It is of interest to note that in two cases second cysts were either formed or took on fresh growth at intervals of three years and two years and a quarter after the first cysts had been cured. In one of these there were found and treated two cysts at the first operation. The plan of treatment I now adopt for all ordinary cases of hydatid of the liver is first to try the effect of evacuating the fluid contents by the aspirator, and, if this fails after one or more repetitions, to cut down upon and expose the cyst, tap it, and, having removed the fluid part of its contents, to incise its walls and stitch their divided edges to the edges of the incision in the abdominal parietes. I do not first stitch the liver tissue over the cyst or the cyst wall to the parietal peritoneum, and subsequently open the cyst (although I have adopted this plan for abscesses), nor do I use any other kind of means to secure adhesions between the cyst wall and abdominal wall before operating. In no case of hydatid tumour of the liver which is detectable at the bedside in a person otherwise in fair health should I allow the patient to go without surgical treatment, because, though hydatid tumours will exist for years without causing trouble or giving rise to symptoms and subsequently dry up, none take this course after they have passed the size of an orange. When they have attained a size large enough to be recognised and to give rise to symptoms, they invariably go on growing, and generally end fatally if not cured by surgical means. In the slight operation of aspirating there are one or two small points to which I attach importance. First, when withdrawing the cannula, I take care to press back the abdominal parietes, and keep them in contact with the liver, so as to prevent the escape of any of the hydatid fluid into the peritoneal cavity. Secondly, I allow no manipulation of the abdomen immediately after puncturing, but I apply for three or four days a soft elastic compress of cotton wool over the cyst, which is retained by a bandage, not by strapping; strapping is less comfortable, and allows of no yielding to the respiratory movements or intestinal distension. Thirdly, it ought to be borne in mind that during the first week or ten days after the tapping there may be some return of the swelling, due, not to reaccumulation of hydatid fluid, but to inflammatory effusion around and within the cyst wall; so that it is not advisable to resort to a second aspiration of the cyst until these inflammatory products are absorbed—i.e., if the swelling is but moderate, not until a fortnight or three weeks have elapsed, and it has become clear that the tumour is again steadily increasing. I believe that by these means we may altogether avoid exciting peritonitis or suppuration of the cyst in cases suitable for tapping. The conditions under which suppuration is prone to follow tapping are just those in which tapping is inappropriate—namely, the presence of a large number of daughter cysts or the cysts of very great size. One important precaution is observed after laying open the cyst. It is—never to pull away any still adhering part of the parent cyst, but to leave it to loosen and be cast off. There is often a great temptation at the operation to remove large portions of partially adherent cyst wall, but it should be resisted for fear of inducing considerable, and may be even fatal, hæmorrhage.

ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

ACUTE NECROSIS OF THE PATELLA; REMOVAL OF THE PATELLA ANTISEPTICALLY; RECOVERY WITH A USEFUL JOINT; REMARKS.

(Under the care of Mr. F. PAGE)

NECROSIS of the patella is certainly of very great rarity; it is not, however, so unusual to find it in a carious condition due to syphilitic affection. Erichsen[1] mentions two cases in which he found necrosis of this bone: in one case it was secondary to fracture; in the other, that of an elderly woman, it came on without any obvious external cause, and gradually extended until it implicated the joint; acute suppuration followed, and amputation of the thigh was performed. The case recorded by Mr. Dodd[2] was that of a female patient aged twenty-seven. The disease commenced acutely about nine months before he removed the bone. She could afterwards fully extend the limb and bend the knee to nearly a right angle. Her power of walking was unimpaired. For the notes of this case we are indebted to Mr. H. B. Angus, clinical clerk.

H. S——, a labourer, aged twenty-six, was admitted on Nov. 1st, 1888, with a large collection of pus round about the right knee and extending for a considerable distance up the thigh. He did not know that he had received any injury, and attributed his condition to sleeping in wet clothes. Ten years ago an exfoliation had been removed from the outer side of the right femur a little above the joint. On Nov. 5th the abscess was opened and drained. It rapidly contracted, but sinuses formed over the patella, and through these the bone could be felt bare. On the 27th of the same month an incision was made across the knee as if for excision of the joint. The bursa was found to be much thickened and the patella extensively necrosed. There was no other disease. The bursa was dissected out and the whole of the patella removed. Repair went on rapidly and continuously without constitutional disturbance, and on Jan. 19th the patient walked out of the hospital, the knee, as a precaution, being fixed by a back splint and bandage.

Remarks by Mr. PAGE.—This man was shown at a meeting of the Northumberland and Durham Medical Society on Feb. 14th, when he walked without lameness or any kind of support up and down the room. The only inconvenience he experiences is a slight check on rising from a sitting to a standing position. In the year 1883 Mr. T. A. Dodd, senior assistant surgeon at the Royal Infirmary, Newcastle-on-Tyne, published a case of excision of the patella, and showed the patient at a meeting of the above-named Society, with a very useful limb. So far as I am aware, Mr. Dodd's was the first case of the kind recorded, and I have not seen any other published since. It is entirely due to the success that attended his operation that I was induced to adopt his procedure.

CROMER COTTAGE HOSPITAL.

CASES ILLUSTRATING THE TREATMENT OF UTERINE AND PERI-UTERINE DISEASE BY APOSTOLI'S METHOD; REMARKS.

(Under the care of Dr. MCCLURE.)

THE electrical treatment of uterine and peri-uterine disease has within the last year been the subject of considerable discussion and criticism. As a contribution to the literature of the subject the following notes should be of some value, especially as considerable time has elapsed since the cessation of the treatment, and there has been no relapse, the patients in Cases 1 and 3 remaining quite well, and Case 3 in the same state as when treatment was discontinued. In a recent report on the subject[3] of the electrical treatment of uterine fibroids, Apostoli states that he has employed it in 278 cases of fibroma, or uterine hypertrophy, necessitating altogether 4246 applications of the constant current, and that in 95 per cent. benefit had been acknowledged. The mortality from the treatment is practically *nil*. There are two methods of utilising electricity in the treatment of uterine diseases. In the

[1] Science and Art of Surgery, vol. ii., p. 303.
[2] THE LANCET, 1884, vol. i.
[3] See Annual of the Univ. Med. Sc., vol. iv.

first, two electrodes are inserted into the tumour, and the direct electrolytic effect produced; in the second, the intensity of the current is localised within the uterus, with the view of acting on the lining membrane of the uterus and indirectly modifying the nutrition of the tumour. The positive pole is placed in the uterus when hæmorrhage or profuse discharge are accompaniments of the fibroid, because the negative tends to increase the bleeding. High intensities, 200 milliampères or more, are used, and this strength made possible by the employment of large electrodes of pliable metal, sponge, or (as Dr. McClure used) potter's clay, over the abdomen. Many chronic inflammatory conditions of the uterus yield readily to this treatment.

CASE 1.—Mrs. M——, aged thirty-five; married eight years; no children. The patient was the subject of a bleeding myoma; uterus fixed; sound passing four inches. The hæmorrhage, pain, and almost constant nausea and sickness had persisted for a month under ordinary methods of treatment. The woman was blanched and seemed at death's door. On April 25th, 1888, she was admitted into the hospital, and a galvanic current of 60 milliampères was passed for seven minutes; the positive (platinum) electrode in the uterus, and a large clay electrode attached to the negative, were almost covering the abdomen. After the first application the sickness and nausea quite ceased, and there was some diminution of the hæmorrhage and pain. The application was repeated two days after with a current strength of 100 milliampères, resulting in a further diminution of hæmorrhage and pain, with marked improvement in the appetite and the general condition. A third application of 112 milliampères was made four days after, with a further reduction of the hæmorrhage. As this was now no longer an urgent symptom, the resolvent action of the negative pole (intra-uterine) to act directly on the mass, and thereby produce absorption, seemed more indicated. Six applications were made at intervals of four days, for ten minutes, with a current strength of 120 milliampères. The uterine discharge was now much lighter in colour, and all pressure symptoms most markedly diminished, the bowels acting naturally without pain; sleep and appetite good. The patient had been getting about for the previous fortnight, and had regained a fair measure of strength. As there was still some oozing from the uterus, a return was made to the positive intra-uterine application. After six such applications had been made, at intervals of about a week, the patient expressed herself as being quite well—better than she had been for some years. The uterus was now freely movable and much diminished in size. There had been a normal period, with very little pain, lasting five days. Since then (June 10th) she has remained quite well.

CASE 2.—J. G——, aged thirty-five, single, was the subject of parametritis of two years' standing, involving uterus and appendages. She had the look of extreme suffering, and said she was never free from pain, the attempt to raise her foot from the ground causing evidently much suffering; in walking, her feet were slid along the ground, her steps being very short. Two large nodulated masses could be felt externally, reaching well out of the pelvis. The uterus was firmly fixed, presenting a hard irregular mass in the vagina; the os could with difficulty be made out. The sound passed three inches and a half. Before resorting to the galvanic current in this case, faradism with Apostoli's fine coil and bipolar uterine electrode was used for the relief of the pain for five minutes with entire success, the relief lasting four or five hours. Three of these applications were made daily. On May 23rd the galvanic current was applied as in the previous case for five minutes, the negative pole being made intra-uterine. Only 30 milliampères could be borne. These applications were made twice a week, and after the third she was decidedly freer from pain and tenderness. In all, six applications were made with the negative intra-uterine pole. The patient was able to walk about without pain, but there did not seem much sensible diminution of the tumour. By this time from 80 to 100 milliampères could be borne. A negative puncture was now made into the most prominent part of the mass in the vagina on the left side, where it seemed softer; the trocar, insulated to a quarter of an inch, and a current of 60 milliampères passed for three minutes; this caused considerable pain. Two more punctures were made at an interval of a week. After the last there was very considerable pain, persisting for a day. A plug of iodoform gauze was inserted after each puncture and renewed the second day. There was each time some slight purulent discharge, and a distinct slough separated about the sixth day. The condition of matters within the vagina had decidedly improved. The cervix was now well defined, and the fulness, especially on the left side, very materially less. The positive intra-uterine electrode was used after this four times, at intervals of four or five days, with a current strength of 80 milliampères. The tumour, as seen externally, was smaller and much less prominent from the vagina. The uterus was movable to a slight extent, and there was a well-defined fossa on each side of the cervix. The patient was discharged on Oct. 11th, on the whole very much better, and was very anxious to come back again for further treatment.

CASE 3.—Miss K——, aged twenty-five, single, was admitted on April 10th. This was a severe case of hysteria, ovarian pain, and tenderness, with amenorrhœa of six months' duration, most obstinate constipation, and a peculiar attack of faintness and dyspnœa, with sudden and great distension of the abdomen. Her mother stated that she had at one time absolutely eaten nothing for a fortnight, and that she had been ill over a year. She was well nourished, and had an excitable, nervous look. She complained of severe pain in both ovarian regions, and there seemed much tenderness. Faradism by the bipolar vaginal electrode was applied, and before the current had passed for five minutes she expressed herself as being free from pain, and deep pressure could be borne in both ovarian regions. The faradism was repeated eight times; besides, she had five applications of static electricity. At one time during her stay she had an almost typical attack of hystero-epilepsy. After a two months' residence in the hospital, she was discharged quite well, the catamenia having come on in the meantime. I have recently heard from her mother that she continues quite free from all pain and hysterical symptoms.

Remarks by Dr. MCCLURE.—In the first case the only other alternative in regard to treatment would have been removal of the appendages, or hysterectomy. I believe in electricity we possess quite as certain a means of controling hæmorrhage, and in this case, if not of absolutely curing the patient, at least of getting rid of all troublesome symptoms. In the second case the patient was not a good subject, having had hæmoptysis, and the apex of one lung not being free from suspicion of disease; yet she was much benefited. The last patient presented the most severe manifestation of hysteria and ovarian neuralgia, lasting over a year and uninfluenced by ordinary treatment. Apostoli's methods, as I have seen them carried out in Paris, were strictly adhered to. The antiseptic douche was used both before and after each application.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Observation on Intestinal Surgery.—Pemphigus Vegetans.

AN ordinary meeting of this Society was held on March 12th; the President, Sir Edward Sieveking, was in the chair.

Mr. F. BOWREMAN JESSETT communicated a paper on the results obtained from an experimental investigation into a novel mode of operating. Certain operations on dogs had been conducted by Mr. Victor Horsley and himself, assisted by Dr. Dove. The operations performed were the following:—1. Gastro-enterostomy and jejuno-ileostomy by the method: Two plates of decalcified bone were prepared, each having a central oval opening and four perforations for sutures near the margin of that opening; sutures were passed through these perforations and fastened at the back. The operation was accomplished by making a longitudinal opening in the stomach and a corresponding opening in the jejunum as high as possible; a bone plate was slipped into each viscus, and the threads passed through all the coats of the stomach on the one hand and the jejunum on the other; the corresponding threads of either plate were then tied firmly, the knots being embedded between the peritoneal surface of the intestine and stomach; the parts were then dropped back into the abdomen and the parietal wound closed. Jejuno-

ileostomy and ileo-ileostomy were performed in identically the same way. The operation could be easily accomplished in from fifteen to twenty minutes. 2. Circular enterorrhaphy, as in cases of intestinal wounds, malignant disease, typhoid ulcer, or in any case in which it was deemed advisable to remove a portion of the intestine. The following method was adopted: The portion of intestine being removed, a narrow band of indiarubber was cut the exact size of the circumference of the upper portion of the divided gut; this was formed into a ring by two catgut sutures. This ring was next pushed into the gut and fastened round its free edge by a continuous catgut suture. Two threads, armed at either end with a common sewing-needle, were prepared. One thread was passed through the upper end of the india-rubber ring, now fixed in the intestine, and all the coats of the bowel, the needles being passed one on either side of the mesentery. The needles of the other thread were passed equidistant through the rubber ring and the coats of the intestine on the convex surface. The needles were next passed through the serous and muscular coats of the lower portion of the bowel, about an eight of an inch from its cut edge, at corresponding points. These threads were drawn tightly, and the upper portion of intestine invaginated into the lower, so that the two peritoneal surfaces were in close contact, and the threads were then tied sufficiently firmly to prevent disinvagination. The bowel was dropped into the abdomen and the wound closed. 3. Ileo-colostomy, an operation especially applicable in cases of tumour or cancer of the colon or intussusception of the ileum into the cæcum and colon, was performed by lining the upper divided end of the intestine with an india-rubber band, in the same manner as described for circular enterorrhaphy. An incision was then made in the convex surface of the colon, and the threads passed through its muscular and serous coats. The threads were then drawn tightly, the small intestine slipped into the slit in the colon, and the threads tied sufficiently firmly to secure the parts in apposition. The distal portion of the divided intestine was invaginated into itself and fixed by a continuous suture passing through the serous and muscular coats only. This operation might also be performed by means of approximation decalcified bone discs. These operations Mr. Jessett had performed on dogs with the following results—viz.: Two cases of gastro-enterostomy with approximation discs; both recovered without bad symptoms. Five cases of jejuno-ileostomy with approximation discs; all recovered. One case of jejuno-ileostomy by implantation; died of secondary hæmorrhage. Seven cases of enterorrhaphy by invagination; four recovered; the two first cases died directly from the operation, and one from obstruction caused by an enterolith. Three cases of ileo-colostomy by implantation; all recovered. To sum up, the results of operations performed by Dr. Senn and himself would be found to be as follows:—Gastro-enterostomy: 6 cases; 1 death (mortality 16·6 per cent.). Jejuno-ileostomy by approximation discs: 13 cases; 1 death (7·69 per cent.). Jejuno-ileostomy by the Czerny-Lembert suture: 7 cases; 5 deaths (71·5 per cent.). Enterorrhaphy by invagination without omental flap: 4 cases; 3 deaths (75·6 per cent.). Enterorrhaphy by invagination with omental flap: 12 cases; 3 deaths (24·99 per cent.). Ileo-colostomy by implantation: 9 cases; 2 deaths (22·2 per cent.). Ileo-colostomy by lateral apposition and Czerny-Lembert suture: 7 cases; 2 deaths (28·6 per cent.). Ileo-colostomy by apposition with approximation discs: 3 cases; 1 death (33 per cent.). By comparing these figures with those collected by Dr. Farquhar Curtis, himself, and others, it was found that the operation, as at present practised with the Czerny-Lembert method, showed a mortality of 86·6 per cent. as against 24·99 per cent. in those cases of enterorrhaphy performed by Senn's method of invagination, and 7·69 per cent. of those performed by means of approximation discs. The advantages claimed for this method of operating were simplicity, expedition, and better results. Simplicity: Mr. Jessett used only from four to six sutures, whereas by the Czerny-Lembert method fifty or sixty sutures were required. Expedition: He could perform the operation in about twenty minutes, whereas the present mode of operating required quite an hour and a half. Better results: He showed a mortality of 7·69 per cent. by Senn's method of approximation discs, whereas of the operation by the Czerny-Lembert suture, performed under the same circumstances by the same operator on similar animals, the mortality was 75·6 per cent., or ten times as great.

A case of Pemphigus Vegetans (Neumann) was placed on record by Dr. H. RADCLIFFE CROCKER. He said that only two previous indubitable cases, and those under a different name, had been recorded in this country, and only eleven others were known, all recorded by German observers. The case now related was a typical instance. A woman aged forty-three, unmarried, was first taken ill at the beginning of April, 1887, with stomatitis and great weakness. A few days later bullæ appeared on the abdomen, soon followed by others. Each bulla from the first, instead of healing, left an ulceration on its site, and in the axillæ and groins there was enormous papillary hypertrophy, producing frambœsiform masses, with a very offensive secretion. There was extensive denudation of the oral mucous membrane. The conjunctiva and vulva were also affected. Deglutition became more and more difficult, and, as fresh crops of bullæ kept on appearing, large raw areas were produced. The patient got gradually weaker, treatment producing no amelioration, except in removing the offensive odour, and she died on July 9th, the disease having lasted three months. A low form of pleuro-pneumonia was the only important visceral lesion. An analysis of this and thirteen other cases showed that the characteristic features of the disease were, that without any previous illness or known cause, pain on swallowing and soreness of the mouth was experienced, due to the formation of bullæ on the oral mucous membrane. In a few days or weeks, crops of bullæ, generally of the ordinary pemphigus type, appeared on the abdomen or elsewhere. These bullæ did not, as usual, dry up into a thin crust, but left superficial ulcerations at their site, which remained unhealed for a long time, and when they did heal, left deep-brown pigmentation. The ulcers were worst over points of pressure, such as the occiput, shoulders, sacrum, and hips. In the axillæ, groins, gluteal folds, and in the lower part of the abdomen—in short, in all the warm and moist situations—fungating papillary growths sprang up on the site of the ruptured bullæ, and might project from a quarter to half an inch above the surface, and secrete a very offensive muco-purulent fluid. Fresh crops of bullæ continued to develop; the mouth affection interfered with nutrition; the patient got progressively weaker, and died after a few weeks or months of exhaustion, or some intercurrent inflammation. Less common features were where the skin lesions preceded those of the mouth. In four instances there had been suppurative onychitis of all the fingers and toes, with shedding of the nails. In two cases there had been clonic convulsions and heightened reflexes. Ptyalism had been noted in three cases, and involvement of the conjunctiva and vulva had been generally noted. In spite of the most varied treatment, the disease had been uniformly fatal in all undoubted cases, though in one case recovery took place in the first attack; but the disease recurred some years later, with a fatal result. If seen early, the administration of opium in full doses, as employed by Mr. George Pollock and Mr. Hutchinson, was worthy of careful trial.—Dr. MAPOTHER gave the details of a case which came under his care in 1875 at St. Vincent's Hospital, Dublin. The patient was a female aged twenty-one, who presented lesions in the mouth and labia minora. Bullæ formed in the groin and axilla, and these burst, allowing flabby granulations to protrude. He looked upon the case then as one of specific pemphigus, and treated it with calomel ointment locally, chlorate of potash and bark internally, and nutritive diet. Later, in another hospital, the case was treated with mercurials externally and internally, and death resulted nine weeks after the commencement of the attack.—Dr. TAYLOR asked to what extent arsenic had been pushed in these cases.—Dr. CROCKER, in reply, said he hoped Dr. Mapother's case would be published. Arsenic, like almost every other drug, had been tried and pushed to its fullest extent, and it was interesting to note that for pemphigus foliaceus, which was perhaps the nearest ally to the affection under discussion, arsenic was equally inefficacious.

CLINICAL SOCIETY OF LONDON.

Tubercular Lupus of Larynx, Trachea, and Bronchi.—Erectile Tumour of Male Breast.—Molluscum Fibrosum.—Quinine Rash.

AN ordinary meeting of this Society was held on March 8th, Dr. Douglas Powell being in the chair.

Dr. WHIPHAM and Dr. DELÉPINE communicated the particulars of a case of Tubercular Lupus of the Larynx,

Trachea, and Bronchi, producing stenosis, in a boy of fourteen, who was admitted into St. George's Hospital on March 15th, 1887. His father died of consumption. The boy, though never strong, had suffered from no serious illness. Nine months previously he got wet, and immediately a lump formed on the right side of his throat; this "broke" on coughing, but nothing was discharged by the mouth. About four or five months previously his voice became weak, and he had been hoarse ever since. He was frequently attacked with dyspnœa, chiefly at night; had slight night sweats, but had not lost flesh. On admission, his voice was husky, his breathing rather stridulous, and he had little cough and no expectoration. His pulse was 100; respiration 32; temperature normal. His teeth were regular and even. There was no appearance or history of syphilis, either acquired or hereditary, and nothing was found amiss in his lungs. Both tonsils were enlarged; on the right was a deeply excavated ulcer, and a more superficial one on the posterior pillar of the fauces; these ulcers closely resembled syphilitic lesions. The larynx was congested, and some glands along the posterior border of both sterno-mastoid muscles, and others in the submaxillary regions, were enlarged. Three days later an oval ulcer was seen occupying the central third of the right vocal cord; this ulcer subsequently became irregular in outline. On March 28th ulceration was found affecting the septum nasi and the inferior turbinated bones, and the breathing was more stridulous. On April 17th the patient had a severe attack of dyspnœa, and on the 21st the laryngeal ulceration was more extensive, and the arytenoid cartilages were swollen. On April 28th tracheotomy was required, but next day two severe attacks of dyspnœa occurred, in the second of which he died. At the necropsy no signs of tubercle in an active state were found, but there was a small cretaceous nodule and some fibrous puckering of the left apex. Ulceration involved the right vocal cord, ventricular band, and ventricle. Below the fourth ring of the trachea there was great constriction and submucous thickening, chiefly on the right side. There was a small ulcer below the tracheotomy wound. The submucous thickening had extended also down the right bronchus and into the smaller bronchial tubes. Microscopic examination showed the subglottic mucosa and the epithelial lining to be much thickened, and its mucous glands partly destroyed. Above the right vocal cord the mucosa and submucosa were almost entirely replaced by granulation tissue, the deeper parts being occupied by an almost continuous layer of tubercular nodules, with very distinct giant cells. In the subglottic mucosa the remarkable feature was the paucity of mucous glands, most of which had been destroyed, those that remained being embedded in modified fibrous tissue. The bacillus of tubercle could not be demonstrated, possibly because the specimen had been six days in chromic acid before an attempt was made to stain it. The lumen of the trachea was diminished by thickening of the mucosa and submucosa; the mucous glands were entirely destroyed, and the cartilages in a state of chronic inflammation, leading to their destruction and dislocation. It seemed hardly possible to doubt the tubercular nature of the disease, and it was probably closely allied to lupus. The case was remarkable in that there was hardly any clearly proved instance of tubercular stenosis of the trachea on record. The excessive formation of cicatricial tissue and the destruction of pre-existing tissue were most like syphilis; the entire destruction of the glands rather resembled leprosy. The presence of distinct granulomata excluded simple inflammatory thickening. Against the syphilitic theory were the facts that there was neither history nor manifestation of the disease, and that the glands were atrophied, whereas in syphilis the reverse was the rule. The excessive formation of fibrous tissue in the trachea could not be held as an insuperable objection to the suggestion that the disease was of a tubercular nature, because fibrous tissue was one of the commonest results of chronic tuberculosis in the lung, and, further, that at least some of the forms of lupus were regarded as distinctly tubercular, and in certain cases of lupus the formation of dense fibrous tissue was a very distinctive feature of the process.—Dr. PERCY KIDD looked upon a fibrous formation in a mucous membrane, such as had been described, as almost unknown. In spite of the failure to find bacilli, he thought there was no doubt as to the tubercular nature of the affection. He alluded to the case of a man who was admitted into the Brompton Hospital in 1885, with no evidence of disease of the lungs, but there was tubercular ulceration of both vocal cords, with considerable thickening. Later, a small tumour developed in one vocal cord, which under the microscope showed nothing but amorphous necrotic tissue. Tracheotomy was performed, and a number of small tumours removed by scraping; this had to be repeated in five months' time. Signs of pulmonary phthisis then developed, the patient died, and at the necropsy typical tubercular infiltration of the larynx and trachea was discovered, together with a recent pulmonary vomica. In that case there was the question whether or not the disease was primarily laryngeal, and he himself inclined to that belief. In Dr. Whipham's case, he thought the presence of the calcareous nodules in the lungs indicated primary pulmonary mischief, and he suggested that the case might be a combination of syphilis and tubercle.—Mr. BUTLIN thought it was desirable to submit the specimen to a committee for examination, for it was something quite unusual; it did not tally with lupus, which was in the main a destructive disease, leaving very little new tissue to replace that which was destroyed. He agreed that it might be a combination of syphilis and tuberculosis. An important practical question had been raised, and that was—when laryngeal and tracheal stenosis existed together, how far was it possible to determine the degree in which each contributed to the obstruction? He referred to a case he was watching, in which symptoms pointing to a double seat of obstruction were present, and he could not be sure that a tracheotomy would be beneficial.—Mr. R. W. PARKER had recorded a case of tracheal and bronchial stenosis, in which the two main bronchi hardly admitted a crow-quill. It was of specific origin, commenced slowly, and crept from below upwards, and this accounted for the absence of dyspnœa.—Dr. POWELL asked if the lungs had been examined for tubercle, and if the teeth had been looked to. Tubercular mischief in the larynx without disease of the lungs was certainly rare, though there was no *a priori* reason why it should not occur. There was certainly suspicion of old disease of the left apex in Dr. Whipham's case; lung disease might often be overlooked, owing to the laryngeal condition producing stridor and masking the pulmonary auscultatory signs. He alluded to a case of fatal tubercular peritonitis in which no disease of the lungs was found.—The specimen was referred to a committee consisting of Mr. Watson Cheyne, Dr. Percy Kidd, Mr. Butlin, and the authors of the paper.

Mr. BLAND SUTTON related a case of Erectile Tumour removed from the mamma of a boy aged seventeen, in whom at birth a cutaneous nævus was noticed connected with a small subcutaneous lump. This gave no trouble till the boy was seven years of age; it then began to enlarge, and continued to do so for the next ten years. A few days before applying to the hospital the tumour began to bleed. The hæmorrhage had considerably reduced the patient, and blood was oozing from the tumour when admitted to the hospital. Next day Mr. Sutton excised the tumour, numerous vessels (sixty in all) requiring a ligature. The patient left the hospital well in twenty-three days, and three months after he had a sound cicatrix. The tumour was three inches and a half in diameter, and was composed of tissue resembling the corpus spongiosum penis, mixed with glandular tissue and fat. Erectile tumours of the mamma were extremely rare.

Dr. PAYNE detailed a case of Molloscum Fibrosum, combined with tumours on the nerves, previously shown to the Society as a living specimen. The patient was a man, aged sixty-four, in St. Thomas's Hospital. He presented the ordinary type of the disease, being almost universally covered with fibrous tumours, some pendulous, some sessile, from the size of a pin's head to that of a hazel nut. The skin was also deeply but irregularly pigmented, with some white patches of leucoderma. Besides these, he presented on examination numerous subcutaneous tumours, which appeared to be smaller than the skin tumours, and were clearly connected with the nerves, either cutaneous or near the surface, and were for the most part very tender. There were also symptoms of muscular weakness, indicating slight paresis of motor nerves, and hyperæsthesia, indicating a slight lesion of sensory nerves. There were no signs of any affection of the central nervous system. The general condition was one of great debility and cachexia, without any definite disease. The skin tumours had been growing for fifteen years. The patient's mental powers were good, and he had been, when younger, remark-

able for muscular power. The case was one of a group first fully described by Recklinghausen, in which the multiple fibrous tumours of the skin and nerves—called respectively molluscum fibrosum and neurofibroma or neuroma—occurred simultaneously. A few cases had since been recorded, among them one published in the Pathological Transactions for 1887 by Dr. Payne. Recklinghausen had suggested that the skin tumours were also nerve tumours, being fibrous growths on the cutaneous nerves, but it was admitted that nerve fibres were not always found in the molluscum fibrosum tumours of the skin. In the present case a small tumour was excised during life, and examined specially with reference to this point. No nerve fibres could be found in it either by the ordinary methods or by osmic acid. Dr. Payne's view was that the skin and nerve tumours arose independently. The case was remarkable for the late period of life (nearly fifty years of age) at which the tumours of the skin began to develop.—Dr. INGLIS PARSONS inquired if the sheaths of the arteries, as well as of the nerves, participated in the formation of these growths.—Dr. POWELL asked if there was atrophy of the nerve trunk beyond the tumour.—Dr. PAYNE, in reply, said there did not appear to be any atrophy in the case he had related. In the earlier case which he had recorded in the Pathological Society's Transactions, the nerves distally were very little altered; there was proliferation of nuclei around the skin glands and the arterial sheaths, but not around the nerve sheaths.

Dr. BURNEY YEO gave an account of several attacks of a Quinine Rash which he had personally experienced. The first attack occurred in August, 1887, while taking two grains of quinine three times a day for a cold in the head. The second about two months afterwards, when taking quinine in the same doses for the same purpose. The third in Rome, in January, 1888, after a single dose of three grains. The true nature of the eruption was not suspected in the first attack, and doubted in the second, as the author had repeatedly taken quinine during former attacks of coryza without any such manifestations. Thinking there might be some impurity in the quinine, he, in May last, obtained a different sample from Messrs. Bell, Oxford-street, for the purity of which they vouched, and, after taking two doses of three grains each, the rash shortly made its appearance as before. Some time afterwards he again tested himself by a very small dose, hoping thereby to establish a tolerance of the drug, but a single dose of a quarter of a grain was rapidly followed by precisely the same cutaneous manifestations. The eruption, which the author fully described, assumed the same character and distribution on each occasion, and was of an erythematous nature—in patches of various sizes and forms, most of them a little raised above the surface. A remarkable fact was that on every occasion it was limited to the lower extremities, extending up to the groins, but never passing beyond that limit. There was no constitutional disturbance. The author, having referred briefly to the history of quinine rashes, concluded the paper with some reflections and inferences on the remarkable fact that a drug which had been for years and quite recently perfectly tolerated, should suddenly in the same person cause such decided cutaneous disorder and in such minute doses.—Dr. POWELL asked if fever attended the eruption, and if other symptoms of cinchonism were present. He recommended its combination with a small quantity of arsenic to obviate its unpleasant effects.—Dr. INGLIS PARSONS asked if tenderness was present over the affected patches such as was seen in rheumatoid erythema.—Dr. YEO replied that there was no fever, no tenderness, and no other signs of cinchonism. Dr. Dreschfeld had communicated to him a similar case where salicylate of soda produced a rash. Quinine was peculiar in other ways. When given solid its antipyretic effect was often small, but if given in effervescing solution that property became much intensified.

MEDICAL SOCIETY OF LONDON.

Presidental Remarks.—Primary Cancer of Pancreas.—Cystoscopy.

AN ordinary meeting of this Society was held on March 11th, Dr. C. THEODORE WILLIAMS being in the chair. He said that, in accordance with the custom of the Society, he proposed delivering the presidential address at the first meeting in October. He paid a high tribute to the excellent qualities of his predecessor, Sir William MacCormac; and, while heartily thanking the Society for the honour they showed him by electing him President, undertook by earnest work and devotion, and by the help of the strong Council and able secretaries, to endeavour to maintain the high reputation of the old Society, keeping in view the lines of action by which its work had been hitherto characterised. He enumerated these as three—catholicity, liberty, and sociability. He continued: "If you consult our proceedings, which have now reached the eleventh volume, you will find that the ground we range over is very extensive, and that, instead of treating of medicine and surgery alone, we embrace medicine, surgery, gynæcology, forensic medicine, public health, and lunacy, our sole restriction being that the subjects must be connected with medical science. We therefore invite communications in all departments, and exclude no subject on which a paper or discussion may prove of utility. Moreover, we are not only catholic in our subjects, but also in our mode of handling them. Whilst, like the Royal Medical and Chirurgical Society, we admit papers of considerable elaboration, provided the time of reading does not exceed half an hour, expecting such papers to be models of scientific observation and of close reasoning, we also welcome short and less finished communications, giving a description of a case with accompanying deductions, like the Clinical Society and the Pathological Society, and invite the exhibition and discussion of morbid specimens, as well as the display of new instruments and apparatus. Moreover, on the clinical evenings we allow a series of living specimens, introduced by short descriptions, and afterwards discussed by those present. As to the second characteristic—freedom—this was marked in the form of the communications and also in the discussions; and because the Society published Proceedings only and not Transactions, authors and contributors obtained immediate publication in the medical press of any discovery or original observation they brought forward, and reserved to themselves the right of inserting their papers in full elsewhere—a privilege sanctioned by no other Society." In the discussions the President appealed for greater help from the Fellows in general practice, urging that their large experience could often furnish, without much preparation or labour, most valuable facts to supply links and fill up hiatuses in the knowledge of certain classes of cases, which would be very instructive, the position of those in general practice being in this Society in every way equal to that of physicians and surgeons. He alluded to the advantages of devoting one or more evenings to special discussions, and instanced a valuable contribution to practical medicine in the debate on the "Treatment of Acute Rheumatism by Salicin and the salicylates," introduced some years ago by Dr. Hilton Fagge. "Thirdly, as to the sociability of the Society, as shown in the friendly and sociable tone of the ordinary meetings as well as in the large gathering at the annual dinner and conversazione. While we welcome the presence in large and increasing numbers of the younger and rising members of the profession, it is pleasant to note that we are graced by the attendance of the senior Fellows (the *patres conscripti*) of the Society, and also by many past presidents, contributing long experience and sound judgment to our discussions and helping us to do our part in building up the rising fabric of medicine and surgery on sure foundations." As an instance of the value of this combination, he referred to some meetings held under the presidency of Sir Joseph Fayrer, when in the discussion of certain questions the Society had the advantage of hearing not only the results of medical science at home, but also the vast experience gathered from India, China, Africa, and our great colonies furnished by Sir J. Fayrer himself and his distinguished friends.

Votes of thanks to the retiring President and officers were then passed, and the ordinary business of the meeting commenced.

Dr. W. P. HERRINGHAM and Mr. C. B. KEETLEY gave details of a case of Primary Cancer of the Pancreas, in which cholecystotomy was performed. It occurred in a man, aged sixty-eight, who was admitted with deep jaundice of a month's duration, which came on a fortnight after an attack of biliary colic. The liver was enlarged, and the gall-bladder palpably dilated. The diagnosis made was obstruction of the common duct by an impacted gall-stone, and, since the symptoms continued and no stone was passed by the bowel, operation was advised. After some time, during which considerable emaciation had taken

place, the patient consented. Cholecystotomy was performed, and three stones, of the size of filberts, were taken from the gall-bladder, but none found in the duct. The patient was left with a biliary fistula. After sixteen days, during which the patient did very well, although he did not lose the jaundice and still got thinner, he became suddenly worse, and died in a few days, reduced to a skeleton. Post-mortem examination showed a primary carcinoma of the pancreas, blocking the bile-duct, with small secondary deposits in one kidney, one gland, and perhaps in the spleen, but none in the liver. Referring to Moore's statistics in St. Bartholomew's Hospital reports, and to Bard and Pic's paper in the *Revue de Médecine*, the authors concluded that continued jaundice with dilated gall bladder pointed to obstruction of the common duct alone; that the only causes of this which were at all common were gall-stone and tumour of the pancreas; that where there were no symptoms of gall-stone tumour might be diagnosed, and where there were such symptoms it was only possible to draw certain conclusions between the two when emaciation advanced with extreme rapidity, as in this case, or when a distinct tumour was felt in the region of the pancreas. The question of a radical operation could scarcely be entertained because the disease nearly always commenced in the head of the gland, and neither man nor animals could survive long after complete removal of the organ. The value of the establishment of a palliative biliary fistula was lessened by the rapidity of the course of the case, and by the difficulty of protecting the skin from the irritating action of the bile.—Dr. EWART had met with an average number of cases and was familiar with the symptoms. The intense jaundice, combined with the rapid emaciation and faulty character of the stools, formed a most valuable tripod of diagnosis. There was generally dilatation of the pancreatic duct, of the gall-bladder, and of the biliary channels throughout the liver, which indicated an obstruction outside the pancreas itself, possibly a spasmodic contraction, at first intermittent, but afterwards continued, of the biliary papilla.—Dr. MAGUIRE had made two post-mortems in cases of cancer of the pancreas. One of these patients had suffered from great pain in the stomach, vomiting which was not urgent, and rapidly developing cachexia; jaundice, which was at first absent, came on to a slight degree before death. Cancers of the pancreas were always extremely indurated.—Mr. BLACK alluded to the great anatomical difficulties in the way of removal of the gland.—Mr. KEETLEY said Billroth was reported to have safely removed the organ. Senn of Chicago had experimentally removed it in dogs, and all had died afterwards of progressive emaciation.—Dr. HERRINGHAM said the papilla and duct were patent in his case. The secondary deposit in the liver in cases of pancreatic cancer had been observed to be in the form of multiple very small growths.

Mr. HURRY FENWICK gave the result of fifteen months' experience of electric illumination of the bladder. He prefaced the conclusions derived from his investigations of bladder diseases as seen by electric light by insisting on the paramount importance of constant practice with the cystoscope, in order to avoid the many pitfalls or "visual fallacies" which the diseased mucous membrane presented in the varying conditions of relaxation, congestion, inflammation, and infiltration. He drew attention to the ureteral cone (slight prolapse of the ureter), congested and swollen rugæ and hæmorrhages found in cytitis, purpura, and syphilis. He asserted that more mistakes would occur in tuberculosis of the bladder than in any other disease; for the mucous membrane when thus affected imitated nearly every variety of vesical growth. The important question of electric cystoscopy *v.* digital exploration was next raised. A list of forty-three cases was submitted, and contrasted with the list published by Sir H. Thompson, and it was shown that the eye was to be trusted to in most cases rather than the finger; for in the author's list only two cases were met with in which "nothing" was found, whilst in Sir H. Thompson's list in fourteen cases the finger discovered "nothing." Neither anæsthesia nor confinement to bed was necessary for the cystoscopy, which had, moreover, the advantage of not being a "cutting operation," and involving no more risk or pain to the patient than ordinary sounding. Fifteen tumours of the bladder found by electric light by Mr. Fenwick were then quoted, and illustrated by clay and wax models taken during life. The following assertions were made: Vesical carcinomata were more often encountered than benign growths, the most frequent spot where tumours first arose being upon the posterior wall behind the ureteral orifices or inter-ureteral bar. The dictum that in malignant growths pain and frequency usually preceded the blood he had found unsound and incorrect. The percentage of recurrence was a very large one, greater, Mr. Fenwick believed, than that for any other growth. He added that the photography of the bladder had not up till now been very successful, the plates not being sufficiently sensitive.—Mr. BOWREMAN JESSETT had used cystoscopy in three cases: in two, both women, suspicion of cancer was confirmed by it; in one case at operation the growth was found to be much larger than had been suspected, and attempt at supra-pubic removal was followed by a lethal result. In one case symptoms of acute vesical irritation followed the use of the instrument.—Dr. PURCELL asked if Mr. Fenwick had adopted Mr. Hill's improvement of fitting an irrigation tube to the instrument.—Mr. SWINFORD EDWARDS spoke of the value of the cystoscope in diagnosis, though its use required considerable experience.—Mr. FENWICK, in reply, said the end of the cystoscope would burn the vesical mucous membrane if in contact with it; it should be kept in the middle of the bladder. The combination with an irrigating apparatus which had been sent him from Vienna he had found to be a failure. It was said that catheterism of the ureter was possible with this instrument.

HARVEIAN SOCIETY.

A MEETING of this Society was held on Thursday, February 28th, Dr. Buzzard, President, in the chair.

Dr. BUCKSTONE BROWNE read a paper entitled "Some Sources of Error in Sounding for Stone."

Unwholesome Conditions in Dwelling-houses.—Mr. SHIRLEY MURPHY read a paper on this subject. He pointed out, in the first instance, that in the letting of furnished houses there was an implied warranty that the house was fit for human occupation, and the same warranty was implied after the passing of the Housing of the Working Classes Act in respect of the letting of unfurnished houses or parts of houses when the rental did not exceed £20 a year. He then proceeded to urge that medical men should be able to express an opinion as to the fitness of a house for habitation, inasmuch as a claim for injury to health alleged to have resulted from the condition of the house must be judged by the light of medical knowledge. He considered that, while much attention was being given to the effects of defective drainage, too little thought was given to the results of insufficient ventilation. The law permitted the erection of houses faulty in important particulars, and further permitted the space in the rear of existing houses, necessary in the health interests of the inhabitants, to be encroached upon by the erection of structures which excluded air and light. He then cited the results of inquiries made by Dr. Arthur Ransome as to the prevalence of tubercle in certain areas in Manchester and Salford, the death-rates of persons living in one, two, or more rooms, as shown by Dr. Russell of Glasgow, and gave the death-rates in localities observed by himself where the conditions were of a similar kind; and, lastly, he discussed the various diseases from which the inhabitants of such localities die. Next, having considered the effects of emanations from sewage, he gave an account of the maladies from which persons breathing such emanations suffered, and argued that their symptoms resembled, although in a more severe degree, the ailments of those who lived under the ordinary unwholesome conditions of many London houses. He then, by diagrams and experiments, showed the circumstances under which the air contents of drains could enter houses, and by which drinking-water could be polluted, even when supplied from the mains of a public water company.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Exhibits.—Relations of Costal Arches to the Sternum.—Arterial Trunks indicating Archaic or Unusual Courses of Nerve Trunks in the Limbs.—Nerve-supply of the Sternalis in an Anencephalous Fœtus.

A MEETING of the Section of Anatomy and Physiology was held on Jan. 4th.

Prof. CUNNINGHAM showed a series of models, in continuation of the exhibits which he made last session, illustrating brain growth—viz.: Head of fœtus six months old; head of

child at birth; head of child at six months; head of child at one year; and head of child at four years. In addition to these and those exhibited last session, he still required heads at two, three, seven, and nine years old respectively, to complete the series sufficiently for the purposes of the observations which he hoped to make.

Prof. CUNNINGHAM exhibited also (1) what he believed was the first case on record where the thoracic duct had been observed absent in the human subject; it was an œdematous fœtus received by Dr. Smith in the out-patient department of the Rotunda Hospital; and, indeed, it was Dr. Smith who had suggested the examination which led to the discovery, from the analogy of what sometimes occurred in œdematous fœtuses of the bovine tribe. (2) A specimen of lumbar spine and plexus with six lumbar vertebræ, indicating that the first lumbar vertebra resembled the dorsal, and developed on the tip of its transverse process a little bony process. (3) An abnormal liver, interesting only from the fact that a large lobe projected from the front of the right, which, in diagnosis, might be mistaken for a tumour.

The PRESIDENT then delivered his inaugural address, after which,

Mr. O. L. ROBINSON (student) read a paper on the Relations of Costal Arches to the Sternum. In *Nature* of November 1st last it was stated that Dr. Lamb, of the United States Army Museum at Washington, had drawn attention to a singular phenomenon observed in human sterna; this was the occurrence, in a number of instances, of eight costal cartilages attached to the sternum. In twelve cases which he had now collected, the abnormality was observed eleven times in negroes, and in the remaining instance in an Indian. In the dissecting-room of Trinity College twenty-five subjects and five dried specimens have been examined, with the view of determining the frequency of this anomaly. In six instances the arrangement of the costal arches has been found abnormal. In one case only were both eighth costal cartilages found attached to the sternum; in the remaining instances the attachment took place on the right side alone. Of these six cases, three were from female and three from male subjects.—Professor CUNNINGHAM said that not the least interesting point in connexion with the arrangement of the cartilages was what was observed in the apes. In the chimpanzee and gorilla there were eight true ribs; to each side of the sternum eight costal cartilages attached. That was not the case with the ourang, which had twelve dorsal vertebræ, and, like man, had seven true ribs. The gibbon intervened between man and the ourang on the one hand, and the chimpanzee and the gorilla on the other. While the eighth costal cartilage almost reached the sternum, it did not articulate with it. Again, the anatomists differed. Lamb had stated that all the cases had been in negroes except one, and that one an Indian; but Luschka referred to a prevalent opinion among some anatomists that this was an abnormality which occurred more frequently in the black races than in the white; yet, from his own observations, it occurred equally in both the black and white races. Hyrtl stated he only saw the condition in the female, and he was under the impression that it was largely due to the influence of tight lacing.

Dr. BROOKS made a communication on Arterial Trunks indicating Archaic or unusual Courses of Nerve Trunks in the Limbs. The author stated that he had hitherto considered the vascular system in the limbs as too variable to afford material from which morphological conclusions could be drawn. But, in examining the nerves of lower forms of vertebrates, he had been struck by the resemblance which they presented to the arrangement of the arterial trunks in the higher mammalia—e.g., man. An examination of the vessels and nerves in the limbs of a mammal would lead to the conclusion that the vascular and nervous trunks were laid down on very much the same lines; thus we find the main artery of the fore limb (brachial) accompanied by a nerve trunk of considerable size (median). Other instances were afforded by the ulnar artery and nerve in the forearm for the greater part of their course—the posterior tibial vessels and nerve, &c. In many instances, however, a marked deviation from this arrangement might be observed. Thus, in the hind limb the main artery passed in front of the thigh and the chief nerve behind it. Again, the arteries destined to supply the back of the forearm passed between the radius and ulna to reach their distribution, while the nerve wound round the neck of the radius; similarly, in the hind limb, the anterior tibial and anterior peroneal arteries passed forwards between the two bones of the leg, while the peroneal nerve wound round the neck of the fibula. The object of the present sketch (the author had not fully worked out the subject as yet) was to show that in some cases where the course of the nerve trunk deviated from the arterial trunk in man, the arterial course indicated an older track of the nerve trunk.

Dr. BIRMINGHAM read a short paper upon the Nerve-supply of the Musculus Sternalis in an Anencephalous Fœtus, a subject of considerable interest at present, owing to the fact that an intercostal supply has been described for the muscle, both in addition to and without the anterior thoracic supply described by Professor Cunningham. In this case the sternalis was very large, and the central part of the great pectoral was absent on both sides. The usual nerve-supply (from the external anterior thoracic here) was easily found, but, in addition, there was a twig of the fourth intercostal nerve which pierced the intercostal muscles, and was distributed to the sternalis, entering its deep surface and ramifying in its substance. The intercostal supply described was found only on the left side. At this stage of the dissection the specimen was shown to Professor Cunningham, who was also of opinion that this was an intercostal supply for the muscle in question. To remove all doubt on the matter, Dr. Brooks examined the nerve and bit of muscle by his acetic acid method, teasing out the specimen under the microscope. His examination showed that the twig from the intercostal, which, as far as could be judged by the naked eye or a hand-glass, was a nerve, contained no true nerve fibres, but was simply connective tissue.—Professor CUNNINGHAM said he did not doubt it was a nerve until Dr. Brooks demonstrated that it was in reality a little vessel. He believed—and that, too, on the authority of Professor Sheppard, of Montreal—that the intercostal nerves supplied the rectus sternalis; but he had no belief whatever in other authorities who had, in Germany, recorded cases where this muscle was supplied by the intercostal nerves, and by the intercostal nerves alone. He believed cases would be found in which there was a double nerve-supply.—Dr. W. HENRY THOMPSON said that, bearing out the view that the rectus sternalus was an aberrant slip of the pectoralis major, he had, at Professor Cunningham's suggestion, traced the intercostal nerve in an ocelot to determine whether it gave any branches of supply to the pectoral muscle or not. On tracing the intercostal nerve, it was found, about an inch from the margin of the sternum, to give off a branch which perforated the intercostal muscles and distributed itself in the rectus abdominis, which here lay between the pectoralis and costal cartilages. Pursuing the trunk onwards, it was then found, quite close to the edge of the sternum, to divide into two branches. One of these, after passing through the rectus, inclined outwards, and was seen to ramify in the pectoralis muscle. The other pierced both muscles lying close up to the sternubria, and was traced to the subcutaneous tissue, going evidently to the skin, which, however, had been removed. There was a remarkable difference in the appearance on dissection of these two branches; the one going to the pectoralis gave off numerous twigs, forming a rich ramification in the muscle substance, but none of these could be traced through the muscle. The other had no appearance of subdivision till it passed through the muscle, and then it seemed to divide into two twigs—a small one directed inwards towards the middle line, and a larger one turning outwards. There had been as yet no time for examination with the microscope.

MIDLAND MEDICAL SOCIETY.

A MEETING of the Society was held on Feb. 6th, Hugh Ker, President, in the chair.

Paralysis.—Dr. HEADLEY NEALE, of Leicester, read a paper upon two rare cases of paralysis. The first patient had been under surgical treatment for two months with a chronic ulcer of the leg caused by the kick of a horse, and was then transferred to the author's care, marked paralysis and atrophy of the extremities having rapidly developed themselves. He could not stand up without support, his gait was ataxic, and muscular incoördination was generally present. The treatment consisted in full diet, but no medicine for a fortnight, after which cod-liver oil and Easton's syrup were exhibited, and the affected muscles faradised daily with a minimum current. In two months

he lost 16lb. in weight; with the dynamometer he could only register 20 with each hand. Complete recovery was established in eighty-seven days, and on his discharge the patient had recovered his normal weight of 11st. 8lb., and could register 90 with each hand. The second case was regarded as a typical example of the "acute ascending paralysis of Landry." The patient, a farmer, began to feel unwell on the morning of April 12th, 1887. The same evening, while drying his face with a towel, "his legs gave way under him" and he fell to the ground. He was seen in consultation by Dr. Neale on the 12th, and was found to be perfectly calm and collected; able to describe his attack, but speech was slow and interrupted; breathing purely costal in type, showing that the phrenics were already implicated; lower extremities almost completely paralysed, the upper ones partially so; sensory and tactile impressions unimpaired; patellar reflexes absent, but no loss of control over bladder and rectum; temperature subnormal; moist râles present in both lungs. The bulbar symptoms dictated an unfavourable prognosis, and the patient died of asphyxia within four days from the first onset of the symptoms.

Idiopathic Tetanus.—Dr. NEALE also described a case followed by recovery, occurring in a delicate boy of twelve, who, after getting heated in play, had lain for some time upon "hassocky" grass. The exhibition of full doses of chloral hydrate and bromide of potassium, and constant alimentation with predigested liquid food, resulted in complete recovery. No breach of continuity of surface could be detected, nor was there any history of a wound.

Varicosity of Abdominal Veins.—Dr. SUCKLING showed a man aged forty-seven with enormous varicose enlargement of the superficial abdominal veins due to portal obstruction. The man had been a soldier, and served in India for many years. He contracted syphilis in 1858, having a sore and gonorrhœa, with suppurating buboes, but no further symptoms. When in India he was in the habit of drinking rum to a great extent, and he had two attacks of jaundice. He seems to have had dysentery also when abroad, and ever since has been liable to attacks of diarrhœa on exposure to cold. He has never vomited blood or passed it in his stools. Six years ago he noticed a small bluish swelling in the epigastric region just below the ensiform cartilage, and as this swelling increased he noticed that the superficial veins were getting large. It was two years later before he noticed the large veins running down to the groin, the upper trunks being first observed. He stated that when he has diarrhœa or lies in bed the swelling diminishes. The tumour causes him no pain. He has never had any swelling of the legs or enlargement of the veins of the legs, nor has he ever had any swelling of the abdomen. The liver cannot be palpated or percussed in front, and there is no tenderness on pressure over the hepatic region. The spleen is considerably enlarged, projecting for at least two inches below the costal margin. In the right infra-scapular region, the liver dulness is present as a narrow strip, two inches wide, following the course of the seventh and eighth ribs into the axilla, where there is scarcely any dulness. In the epigastric region there is a large nodulated mass of varicose veins, extending from the ensiform cartilage to one inch above the umbilicus. The tumour is seven inches long and five inches broad. At the two sides about the middle two large and tortuous veins (enlarged superficial epigastric) join it. These can be traced to the saphenous vein over the upper part of the thigh. Pressure on them above causes a diminution in their size below and an increase in the size of the tumour. Another large tortuous vein (vein of Sappey) runs from the right side of the tumour across the costal margin, and disappears in the sixth space close to the sternum. The blood in this is running from the tumour. Pressure on the tumour reduces its size, and it at once swells up again on removing the pressure. There is no pulsation, but a loud, continuous, venous hum, altered by pressure, can be heard over the swelling, and a few patches of fine capillary injection are scattered over it. On palpation a peculiar thrill can be perceived. The great enlargement of the superficial veins in this case explains the patient's escape from ascites and the various hæmorrhages usually observed in cirrhosis of the liver, and undoubtedly explains also the man's escape from death. He is delicate and feeble, but otherwise suffers no inconvenience, and is now almost a total abstainer.

Rheumatic nodules.—Dr. T. STACEY WILSON exhibited a child who showed in a typical way the small rheumatic nodules and the frequently associated symptoms of chorea and endocarditis as described by Drs. Barlow and Warner at the International Medical Congress of 1881. The main point of interest in the case was the association of symmetrical ganglia of the extensor tendons with the above conditions, thus indicating the occasional rheumatic origin of ganglia. Dr. Wilson also exhibited gelatine casts of the hands of another patient who had these rheumatic nodules.

Changes in Vessels after Amputation.—Dr. A. E. MAHOOD exhibited the upper end of a right femur, the iliac arteries, and great sciatic nerve, obtained from a subject in the dissecting-room of the Queen's College. These specimens showed in a marked manner some of the changes which took place after amputation through the upper third of the right thigh. The common iliac artery of the right side, with its branches, was much diminished in calibre.

Large Fatty Tumour.—Mr. AUGUSTUS CLAY showed a lipoma weighing three pounds and a half, which he had removed from the upper third of a man's thigh. The tumour had been growing for twenty-five years, was undergoing calcareous degeneration in its centre, and had commenced to ulcerate through the skin at its most dependent part.

Reviews and Notices of Books.

The Illustrated Optical Manual. By Surgeon-General Sir T. LONGMORE, C.B., F.R.C.S. Fourth Edition, with 74 Figures by Inspector-General Dr. MACDONALD, R.N. Pp. 239. London: Longmans, Green, and Co. 1888.

THE original edition of this work was simply intended to be a guide to the military surgeon in testing recruits and in dealing with the principal errors of refraction, and was even in that limited form very useful. The present edition has a more extensive scope, and aims at placing before the practitioner, whether military or civil, but more particularly the former, a general account of the optical relations of the eye, of the chief defects to which it is liable in this respect, and the mode in which they may be recognised and treated. The first chapter is devoted to a general account of light and of lenses, such as is to be found in most ophthalmological works, the various forms of lenses being illustrated by well-designed and well-executed woodcuts. Sir T. Longmore discusses the relative value of quartz or pebble lenses and those made of glass, inquiries concerning which are often made by patients, and observes "that unless the quartz is unusually pure and transparent, is scientifically cut and shaped as regards refraction, it is a decidedly inferior material to good crown glass for optical purposes, and it is doubtful whether pebbles do not remain more trying to the eyes even when proper attention is given to the requisite qualities just named than spectacles of the best crown glass, such as is specially manufactured for spectacle lenses." The characters of hypermetropia, myopia, and especially of astigmatism, are well and fully given, and are followed by a description of the chief forms of modern ophthalmoscopes, and the mode of testing the degree of accommodation and the existence of any colour blindness.

The use of spectacles, it appears, has not hitherto been officially sanctioned by any published regulation in the British army, and no arrangements are made by which soldiers serving on foreign stations can replace broken or damaged lenses. The fact, however, that they are in general use both in the German and in the French armies will probably soon lead to their introduction in our own services; the expense would be small, and although with us, owing to the different mode in which recruiting is effected as compared with continental armies, any defect of refraction is concealed, rather than, as in those countries, exaggerated to the utmost in order to avoid conscription, there can be no question that great advantage would result from their employment to remedy even slight degrees

of impaired vision. The present work supplies a want which is and has been much felt by ophthalmic surgeons—viz., an authoritative exposition of the precise defect or degree of defect which will prevent the entrance of a boy into one or other of the services. It was a hardship that was of not at all uncommon occurrence until quite recently, and of which just complaint was frequently made, that a candidate, after working for years at the scientific part of his profession and being otherwise strong and healthy, was liable to be rejected on a degree of impairment of vision which varied with the examining body. With this volume before the profession, such an accident is not now likely to occur. It is here laid down that myopia or hypermetropia of such degree that vision is inferior to $\frac{1}{4}\frac{1}{8}$ Sn., rendering the recruit incapable of distinguishing at a distance of ten feet dots which correspond at that distance to a bull's-eye three feet in diameter at 600 yards, incapacitates him from entering the service. The importance of good and clear vision for distance in warfare is well brought out in a short section upon judging distances. Sir T. Longmore remarks: "In firing at distances up to 300 yards at a target six feet in height, the bullet does not rise anywhere more than six feet above the ground, and hence a man of that height would be hit at any point of the bullet's path within this range; but if elevated to suit a distance of 400 yards, the space within which he could be hit by the bullet in the latter part of its course would be limited to 110 yards; if at 800 yards, the limit of the dangerous space would be lessened to 45 yards; if at 1000, there would only be a space of about 20 yards within which an object six feet in height would be liable to be struck." The principle of aiming, with the uses of the fore and back sight of a rifle, and of the advantages and disadvantages of monocular aiming, are given in some detail; and the sound maxim is laid down that to shoot well at long ranges a man must train and strengthen his eyes by looking at small objects at long distances.

Roaring in Horses (Laryngismus Paralyticus); its History, Nature, Causes, Prevention, and Treatment. By GEORGE FLEMING, C.B., Principal Veterinary Surgeon of the Army. Pp. 160. London: Baillière, Tindall, and Cox. 1889.

THIS is a work of much importance to all who have to do with horses, for it treats of an affection which greatly deteriorates the value of an animal, and has hitherto been deemed irremediable. Dr. Fleming estimates that at least 6 per cent. of the horses in the United Kingdom have this infirmity. On May 1st, 1888, of 12,745 horses in the army, 690 were so affected, or 54 per 1000 of strength. In the five years 1883–87 there were 326 army horses cast and sold for this disability, being in the proportion of 5·6 per 1000 of the average strength. In the earlier chapters the author gives an interesting history of the disease as it has been described by numerous writers from 1664 to the present time, a brief account of the various causes of noisy respiration, and some details respecting its prevalence in different countries. He then treats of the predisposing causes under the heads of (1) climate, (2) heredity, (3) breed, (4) sex, (5) size, (6) age, (7) conformation, (8) management, and (9) accidental causes, and gives a full account of the symptoms and diagnosis of chronic roaring. This is followed by a careful description, illustrated by drawings, of the anatomy and physiology of the larynx of the horse, and of the morbid alterations which give rise to this affection. With regard to the pathological conditions which lead to its development, Dr. Fleming states as an ascertained fact that debility or atrophy of the left dilator muscles (the posterior crico-arytenoid) is the *causa proxima* of chronic roaring. This wasting of the muscles he traces to "some imperfection in the condition of the nerve distributed to them. ..... Pressure upon or disease of the nerve in any part of its course ..... will impair or destroy its function, and in time alter its structure"; and he discusses carefully the various causes of this pressure or disturbance.

The treatment of roaring is considered under two heads—preventive and curative. The former comprises—1. Exclusion of unsound horses for breeding purposes, for there is abundant evidence of the influence of heredity in its production. 2. Care in the management of young horses, especially as regards premature working. "To exact exertion from a two-year old horse as if he were a four-year old (no matter how he may be stimulated to growth by hot stables and rich food) cannot be otherwise than damaging to him, and especially to the organs of respiration, circulation, and locomotion. By deferring the training and racing of thoroughbreds for a year or two the predisposition to this and other damaging defects would be immensely lessened, if not altogether got rid of, and a more healthy and useful race of horses ensured." 3. Great importance is attached to hygienic management, especially as regards ventilation of stables and attention to the clothing during cold weather.

The curative treatment may be divided into medical and surgical. The former appears to be of very little use, although Dr. Fleming has found electricity, in the form of faradisation, in conjunction with iodide of potassium and Fowler's solution, beneficial in some instances. A similar want of success appears to have hitherto attended the surgical treatment of the disability, but Dr. Fleming has introduced a new operation, which so far as it has been tried, has been attended with remarkable benefit. It consists in the removal of the left arytenoid cartilage and vocal cord. For the mode of performing the operation we must refer our readers to the book, in which it is very clearly and fully described. The results have been most satisfactory, and lead to the belief that "a very large percentage of horses affected with roaring may be rendered serviceable, and perform their work without impediment in respiration." A large number of horses have been operated upon, under Dr. Fleming's direction, by Mr. F. Raymond of the Army Veterinary Department, without a fatal case or accident of any kind. "Of course the success depended upon the skill with which the horses were treated, both during operation and subsequently; care in the administration of the chloroform; expertness in surgical manipulation, acquired by practice; close attention to the wounds for some days, and the strict observance of sanitary precautions." The book is written with the care which characterises all Dr. Fleming's work, and is deserving of the study of all who are interested in veterinary surgery. We congratulate Dr. Fleming upon the scientific manner in which he has conducted his inquiry, the careful deductions he has drawn from his observations, the success which has attended his operation, and the prospect it holds out of materially reducing the amount of inefficiency caused by this hitherto intractable disability.

Memoirs and Memoranda in Anatomy. By JOHN CLELAND, M.D., LL.D., D.Sc., F.R.S.; JOHN YULE MACKAY, M.D., C.M.; and ROBERT BRUCE YOUNG, M.A., M.B., C.M. Vol. I. London: Williams and Norgate. 1889.

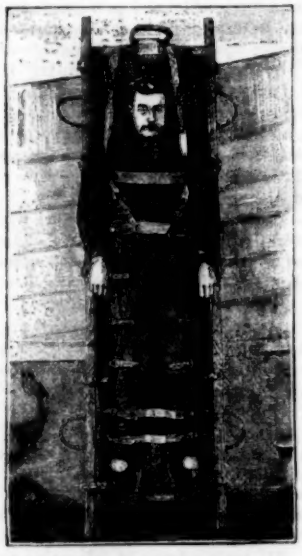
THE eminent Professor of Anatomy in the University of Glasgow and his demonstrators have collected and republished, in this little volume of 160 pages, many of the interesting papers and observations which they have contributed to human and comparative anatomy, and which until now were scattered in various scientific and medical journals. We must first thank Professor Cleland for his interesting reproduction of the portrait of the late John Goodsir, whose friends and former students will be most grateful for this worthy reminiscence of their great teacher, and the explicatory note concerning it. Prof. Cleland's papers

on comparative anatomy, teratology, and cognate subjects are very instructive, although in some points many anatomists will not be found to accept his conclusions in their entirety. Dr. Mackay's researches on the arteries of vertebrates are well known to, and appreciated by, every scientific teacher. We must, however, dissent from his description of the aponeuroses of the transversalis and internal oblique muscles. We are prepared to allow that the description in our text-books is inadequate, but we cannot admit that either Braune's or Dr. Mackay's account of the sheath of the rectus abdominis is invariably correct. Henle's and Hesselbach's bands, although often present, cannot always be made out, and the posterior part of the sheath below the semilunar fold of Douglas is often very ill defined, and certainly not formed, as a rule, by the aponeurosis of the transversalis muscle, as stated by Braune. Dr. Young has largely dealt with the mechanism of the joints and limbs; he has also contributed some valuable notes on abnormalities in the arrangement and development of the intestine. There are many excellent plates, by means of which the articles are adequately illustrated.

New Inventions.

A NEW AMBULANCE STRETCHER.

THIS stretcher has been designed by Mr. M. J. Darke, one of the officers of the Mission to Deep-sea Fishermen, and forms a part of the equipment of the cruising hospital now afloat in the North Sea. The transport of sick or injured men from one ship to another in a northern fishing fleet is a matter often attended with considerable difficulty, especially when a heavy sea is running. The patient has to be removed from the cabin of a trawler and brought on



deck; he has then to be lowered into the smack's boat and carried to the hospital ship or to the steam carrier. Hence arises great difficulty in getting the patient from the boat to the larger vessel—a difficulty that is very considerable in a stiff breeze. Finally, the man has to be placed in very nearly a vertical position in order that he may be lowered through the companion of the steamer or the main hatch of the cruising hospital. In such transport everything must be done by hand; tackles and davits are worse than useless, and the stretcher employed must be one that will hold the man securely in almost any position. The present stretcher consists of a framework of lancewood with short handles and rope grommets, placed as shown in the illustration. The canvas body is of tanned navy flax; the breeches and straps (which are inseparable from the bed of the stretcher) are of the same material. The stretcher can be used in any ordinary boat and in any sea in which a boat can live, and can be hoisted on to the deck of a large ship by davits or by a single whip from the yard-arm. It can be hoisted or lowered in the upright position, and in that position it is depicted in the woodcut. The stretcher has been severely tested in the North Sea, and has proved to be invaluable. In one recent case a man broke his thigh on board a trawler. A heavy sea was running at the time. The doctor of the hospital ship boarded the trawler with the sea stretcher, and, having secured the patient to it, adjusted the fracture. The man was conveyed in a smack's boat to the cutter, lowered in a vertical position into the cabin, and was not removed from the stretcher until, after steaming 250 miles, he reached the London Hospital. He states that "he never had a bit of pain all the way." It is evident also that the stretcher would prove most useful in carrying injured or helpless persons through narrow doorways, or into railway carriages, or up and down narrow staircases, since it can be tilted or lifted sideways or placed on end without the occupant being disturbed.

COVERED CUP FOR NURSES.

WE have received from a correspondent a specimen of what is called the "Covered Cup for Nurses." This is made in the form of a teapot, which can only be filled from below; it is recommended that a cork be placed in the spout, so that the contents of the vessel may be shut off from the air and falling dust of the ward and kept free from taint, as well as warm for a longer period. It is suggested that this will prove of great use in the long night hours of those on duty, especially if the case is an offensive one. Mr. Jenkinson, of Princes-street, Edinburgh, is the maker. We must, however, draw our correspondent's attention to the fact that such teapots are well known and of old fashion both in England and Japan. We think, however, that the pattern has gone out of date, and the present proposal as regards special use is of value.

OUT-PATIENT WORK IN GENERAL HOSPITALS.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to a paragraph in your leading article on the out-patient system in THE LANCET of the 2nd inst. I am there quoted as having stated that the inspection system "had excluded 50 per cent., notably in the special departments." As this quotation does not, from misunderstanding doubtless, represent the exact state of affairs, I trouble you with a few words of explanation. It is quite true that the special departments were reduced in the first year of the system to more than the extent noted, and have since been well under control. But the reduction does not apply to the large total number of general out-patients in attendance, but simply to the number of cases selected from the total for thorough investigation. Of these something under 50 per cent. are rejected. It would be a waste of time to make elaborate inquiries about the great mass, their social position being easily recognised by a skilled observer; and with regard to these, the only object to be kept in view is to eliminate from them, as far as possible, cases chargeable to the neighbouring unions. I am, Sirs, your obedient servant,

London Hospital, Whitechapel-road, E., March 8th, 1889. WM. J. NIXON, House Governor.

THE LANCET.

LONDON: SATURDAY, MARCH 16, 1889.

IT is important, at the present crisis, to review some of the clauses of the Bye-laws of the Council of the College of Surgeons of England which affect the Members of the College. So rigorous and searching are these clauses that men who fulfil these conditions must be necessarily persons of honourable position and intelligence.

A young man who aspires to become a Member of the Royal College of Surgeons has to submit to a definite course of study on set conditions (conditions actually defined by the *Council* of the College of Surgeons, and not by the *College*, as erroneously stated in Section 15); then

"If the Court of Examiners shall find any circumstance in the character, conduct, or mode of practice of any candidate for examination which in their opinion renders such candidate unfit to be admitted a Member of the College, the said court shall have the power of declining to examine him until the opinion of the Council has been taken thereon."

The next very important item in the programme is for the applicant to pay the fees into the College coffer. After that he undergoes the examination tests, and, according to his estimated merit, is accepted or rejected by the Court of Examiners as a fit person to receive or not the Membership of the College. This pass or pluck report is referred to the Council of the College for judicial completion.

But an interesting ordeal yet awaits the embryonic surgeon in the interval of time between that of having satisfied his examiners and the obtaining of his diploma from the Council, for—

"Every person prior to his admission as a Member of the College shall in the presence of an officer of the College make and subscribe his name to the following declaration:

"'I, A. B., do solemnly and sincerely declare that, while a Member of the Royal College of Surgeons of England, I will observe the Bye-laws thereof; that I will obey every lawful summons issued by order of the Council of the said College, having no reasonable excuse to the contrary; and that I will demean myself honourably in the practice of my profession, and to the utmost of my power maintain the dignity and welfare of the College.'"

So important is this declaration, in the opinion of the Council, that the terms are in effect repeated in Clause 5, Section 14:—

"Every person, prior to his admission as a Member, shall subscribe his name to a copy of the Bye-laws of the College, in testimony of his having engaged himself to the observance thereof."

It is evident that at this critical juncture in any young man's career, in his light-heartedness at having passed the examination, and as his last effort to gain his diploma, he would probably sign any paper the Council of the College required. Moreover, we are convinced that not one candidate in a thousand has the remotest idea of what the Bye-laws of the College have been or what they are. We fully recognise the necessity of submission on the part of all Members of the College to any equitable Bye-law of the *College*, and unexceptionable in that sense are their signatures and declarations of loyalty and fidelity to their own College; but that the Members of any College should indefinitely submit to the Bye-laws of its *Council* (over whose acts they have absolutely no control) is rather too much to expect; and at present the contention of many reformers is that in their legitimate effort to repeal some of the most objectionable of these Bye-laws they are endeavouring to the utmost of their power to maintain the dignity and welfare of the College.

Again, is it not a one-sided agreement that the Council may formulate fresh Bye-laws (to be enacted after submission to the proper authority) if the old ones do not suit its purpose, but that the Members may not frame, alter, or repeal any Bye-law, however objectionable to them? The Council elect to bind the Members, but refuse to be bound themselves.

We have on this occasion quoted some of these Bye-laws at length, to demonstrate how carefully and jealously guarded are the entrance gates to the College in Lincoln's-inn-fields; and now let us observe how the Council treat their own accepted Members, the body corporate of the College. Sir GUYER HUNTER asked the Home Secretary on March 11th as to the circumstances requiring the aid of a strong body of policemen inside as well as outside the College of Surgeons in Lincoln's-inn-fields on Feb. 28th, 1889. The Home Secretary said that "the First Commissioner of Police had some reason to suppose that a disturbance might take place at the Royal College of Surgeons on the afternoon of the 28th ult., and the usual precautions were taken in the way of ordering a number of patrols; but the district inspector misconceived his instructions, and posted a force of men inside the building. (Laughter.)" Well might the House laugh. To say the least, the Council, having recommitted the mistake of prescribing such doubtful and inappropriate remedies as policemen on this occasion, might have taken the precaution of labelling them "For external application only"!

But Bye-law 17 empowers the Council to expel those men who presumed, as a last resource, to summon an unauthorised meeting of Members at the College—the self-same punishment reserved for the grossest criminality. Why, the mere suggestion that members of a College acting (as they think) within their corporate rights, and under the responsible advice of learned counsel, should be threatened with such a severe penalty is as much an anachronism as that a man should now suffer the extreme penalty of the law for sheep-stealing. That of only twenty-four members of Council even a bare majority should be entrusted with unfettered disciplinary power over the commonalty in the present day is intolerable, especially when it is borne in mind that the reformers are their own professional brethren. Should any such harsh treatment be attempted nowadays, we are convinced that the Medical Council, in which the rights of the democracy have recently received practical recognition from Parliament, would not confirm such an error of procedure, and would decline to remove any qualification from the Medical Register without the most ample investigation and most just cause, and we are sure that the best men in our ranks will refuse to submit to the authority of a body, or support the existence of a system of govern-

ment, that is either unwilling or unable to conform itself to modern usage and to advancing requirements.

THERE are few more interesting or more obscure chapters in pathology than that which relates to the affinities and antagonisms between different diseases, and their power of modifying, either favourably or unfavourably, each other's normal course. The subject is worthy of more attention than it has hitherto received, inasmuch as its thorough elucidation would certainly throw much light upon the etiology of disease, and give definiteness to our conceptions regarding the mode of operation of morbid germs. We refer to such problems as, Can two specific constitutional diseases coexist in the same subject? Presuming such coexistence, of which, in contravention to the teaching of HUNTER, there can no longer be any doubt, Is the tendency of two such diseases to neutralise or to aggravate each other? What bearing upon prognosis and treatment has the supervention of diphtheria upon typhus, for example, or scarlatina upon enteric fever? Does the heavy burden of tuberculosis predispose to any other specific malady, or confer an immunity, comparative or absolute, from such? Questions of this kind are of great theoretic interest and considerable practical importance, but the evidence upon the subject and the literature dealing with it are still scanty.

The fact that HUNTER taught the impossibility of two specific fevers coexisting is, at all events, presumptive proof that such coexistence is rare; but that such cases occur is no longer doubtful, and it would appear that any two of the exanthemata may run a simultaneous course in the same subject. MURCHISON has recorded eight cases in which scarlatina supervened upon enteric fever, three cases of diphtheria coexisting with typhus, and six cases in which typhus and enteric were present in the same patient at the same time. These observations have been confirmed by PEACOCK, GAIRDNER, MACLAGAN, and others, and the fact of such coexistence is no longer denied. Its import, however, is yet by no means clearly defined. It shows, at all events, that the morbid processes set up in the blood and tissues by the ingress of different specific germs do not tend in any decided degree to neutralise each other. Thus, scarlatina can certainly appear in a patient suffering from enteric fever, run its usual course, with typical symptoms, and subside, leaving the enteric to pursue its career. There does not, on the other hand, appear to be much evidence, if any, that the coexistence of two specific fevers multiplies the patient's risk in the way that might perhaps have been anticipated. A large majority of the patients simultaneously affected by two such diseases have undoubtedly recovered. If we can trust the very scanty evidence available on the subject, the coexistence of enteric and scarlatina, or of enteric and typhus, is much less grave than the coexistence of diphtheria and typhus, but the statistics are insufficient to warrant any definite conclusions.

The relation of the bacillus of tubercle to other specific germs opens up a wide field of controversy, and suggests many problems which still await solution. Let us look at its relation to three other specific maladies—viz., syphilis, enteric, and ague. The precise relation of phthisis and syphilis has given rise to much controversy, but the tendency of all recent investigation has been to regard many cases of destructive pulmonary disease in syphilitic subjects as the result of the breaking down of specific deposits rather than of the presence of tubercle. There seems, on the other hand, very little doubt that the debilitating effect of a prolonged attack of syphilis does, as might have been conjectured from analogy, powerfully predispose to the development of phthisis. We are thus driven to conclude that the presence of the syphilitic virus does not protect from the invasion of tubercle, and probably, on the other hand, only predisposes to such invasion in so far as it injures the general health, and so reduces the power of resisting disease.

As regards phthisis and enteric, it has been held that patients suffering from well-marked phthisis rarely contract enteric, although it is not doubted by anyone that prolonged cases of this fever are in many instances followed by the development of phthisis. The latter fact is quite in accord with analogy; the former, if true, would be an instance of that antagonism between different morbid poisons of which the evidence appears so scanty. It was long taught quite confidently that a strong antagonism exists between tubercle and ague; but this theory, though supported by such authorities as SCHÖNLEIN and BOUDIN, has shared the fate of so many other unproved assumptions. HIRSCH has definitely shown that, whatever colour may have been lent to this view by limited local experience in various districts, it is in no way supported by the results of a wide survey of all the available facts.

It would thus seem that we know but little of the interrelations of specific morbid conditions, and that many theories once confidently advanced on the subject have been compelled to give way under the pressure of accumulating experience. On the whole, it is encouraging to note that the development of a fresh specific disease in a patient already affected is, at least, a less untoward contingency than might have been feared. Another conclusion which the facts amply justify is that, while the coexistence of two specific diseases is unquestionably rare, it is not so rare that we need hesitate to diagnose such coexistence where the evidence for it seems fairly conclusive.

THE account given by our Special Commissioner of the chain and nail makers in the neighbourhood of Dudley and Cradley Heath will usefully supplement the evidence taken by the House of Lords' Commission on Sweating. The following main facts seem clearly established. The district is in an insanitary condition, because it is not properly drained, because the houses are overcrowded, and because there are wells exposed to the contamination of neighbouring ashpits and surface drainage. The houses are neglected; rain and wet consequently find easy entrance; while the basement walls are often befouled by some surface drain. The nail and chain makers do not earn enough to rent suitable dwellings or to clothe and feed themselves sufficiently. This poverty is due in a measure to the "foggers" or sweaters, who make their profits by paying less than the scale price allowed in the trade and by the indirect enforcement of the truck system. They will not give work to those who do not deal with certain shops belonging to the fogger's relatives or associates, though the prices charged at these shops are from 10 to 30 per cent. dearer than in others. Thus is poverty

accentuated. The result manifests itself principally in the very high infant mortality. The present generation was brought up at a period of comparative prosperity, when wages were 40 to 50 per cent. higher than at present, and the mortality among adults is consequently much lower. Also it may be argued that when a child has survived the neglect, bad sanitation, and starvation to which it is exposed in this district, it can endure almost anything.

It is easier, however, to point to the evils that undoubtedly exist than to suggest a remedy. In this respect the position of women in the trade naturally comes up for consideration. Women have been prohibited from working in the coal mines. Should they not also be debarred from making chains and nails? Economically, the competition of cheap woman labour has done more than anything else to reduce the wages of both men and women to so low a level that it is impossible for them to earn enough to maintain decency and health. From a physical and medical point of view the work in many instances is too heavy for women. The leap and shove with the one foot on the treadle to bring the Oliver hammer down with sufficient force to beat out the red-hot iron must be, and is, injurious. If both feet could be used alternately it might not do so much mischief. As it is, the principal strain is on one side of the body. More injurious than the actual work is the carrying of iron, nails, or chains backwards and forwards from the smithies to the warehouses. The lightest load is 53 lb., and sometimes a woman may be met carrying, and that for a long distance, a hundredweight of nails or chains. The result is, occasionally, some spinal mischief, and very frequently uterine troubles. All the medical evidence concurs in testifying to the numerous abnormal accouchements of women who work at chain or nail making. False presentations are constantly occurring, and instruments have to be used very frequently. Medical men who have practised in other districts testify that there is much more trouble with the chain and nail makers than, for instance, with the women who work at the boot trade in the neighbourhood of Northampton. In view of these facts, together with the appalling infant mortality, we may at least conclude that the heavier work, such as spike-nail making, should be done by men only.

The extension of the Factory and Sanitary Acts to all places where nails and chains are made is unanimously advocated, and to render this effective a very large staff of inspectors will have to be employed. At a fixed hour every smithy should be closed, and it should be impossible for either man or woman to work more than ten hours a day. At present it is not uncommon to find women working as late as four in the morning. Perhaps in such cases there has been some idling at the commencement of the week. With a single exception, all the women our Commissioner questioned were in favour of abolishing women's work altogether. The men, they argue, would then earn higher wages, and the women would have time to take proper care of their children. Then, again, the immorality that naturally must ensue when young men and women work in close contiguity in a state of semi-nudity would be in a great measure obviated if women were not employed in this trade. The total suppression, or even the limiting, of such female work would undoubtedly produce a great improvement in the health of the population concerned. This also would raise the rate of wages paid, and thus deprive the sweater of some of his numerous and willing victims. But it would probably not suffice to abolish sweating altogether. For this some system of co-operation is required; and for such co-operation to be applied on a sufficiently large and disinterested scale the intervention of the public authorities may be necessary.

Annotations.

"Ne quid nimis."

THE MEDICAL SCHOOL AT THE IRISH CATHOLIC UNIVERSITY AND THE QUEEN'S COLLEGES.

A VERY lively and interesting controversy has been going on in *The Times* between Archbishop Walsh, on the part of the Medical School of the Catholic University of Ireland, and Professor Porter, President of the Queen's College, Belfast, on the part of the Queen's Colleges. We do not pretend to such an intimate knowledge of Irish medical schools and questions as to entitle or enable us to decide between two such high-class combatants, who are doubtless equally anxious to be accurate; but it is something to try to formulate the questions in dispute, and to understand the rivalry, not discreditable or disadvantageous, of different schools. The Archbishop has tried to show that the Queen's Colleges of Belfast, Cork, and Galway, which receive among them £5000 a year for medical teaching, have been beaten in award of first-class honours by the Catholic University School of Medicine and in the first-class exhibitions. The Archbishop avers that, taking a period of three years, of 13 first-class honours, 6 went to the Queen's Colleges and 7 to the Catholic University Medical School and University College; and that of the 12 first-class exhibitions awarded by the Royal University, 5 went to the Queen's Colleges and 7 to the Catholic University Medical School and University College. Professor Porter makes a very efficient answer. He takes a larger period into the purview, and shows that since the foundation of the Royal University in 1882 there have been awarded at the various medical examinations 48 first-class and 99 second-class honours, of which Queen's College, Belfast, gained 21 first and 30 second. During the same time 25 first-class and 52 second-class exhibitions were awarded, and to these Belfast students were entitled by their answering to 8 first-class and 52 second-class. Professor Porter makes another point of the fact that the examiners of the Royal University, which is only an examining university, are not selected in fair proportion from the several schools. A preponderating number is taken from certain schools. There are probably over 500 candidates for medical graduation in the Royal University. It has a staff of 31 examiners. There are 9 examiners in the important final examination for the degree, 7 of whom belong to Dublin, and not one to Belfast. Of the 31 examiners, 17 are from the Dublin schools and only 5 from Belfast, though more than 51 per cent. of those who have taken its medical degrees have been trained in Queen's College, Belfast. Professor Porter points out, too, that the Dublin students have all the advantages in the three medical schools of Dublin connected with the Catholic University—the Carmichael, the Ledwich, and the University schools—of larger professorial staffs and the laboratories and museums of Dublin. We venture to hope that good will arise out of this controversy. Whatever the faults of the Queen's Colleges from

a Catholic point of view, that of Belfast, at least, has no reason to be ashamed of its work, as judged by the comparative results of the examinations in the Royal University.

A HOSPITAL WITHOUT AN OUT-PATIENT DEPARTMENT.

WE are so constantly exposing the evils of indiscriminate charity in hospitals, and especially in their out-patient department, that it is a pleasure to be able to mention one hospital at least which does excellent work of the sort for which alone hospitals exist, and which has actually no out-patient department. We refer to the Sunderland Infirmary, as our commissioner did a few weeks ago in his account of a visit just paid by him. We gather chiefly from the accounts kindly sent us by the secretary to the infirmary, Mr. Thomas Robinson, that the out-patient department was discontinued chiefly because it was abused. He writes as follows: "For many years previous to 1877 it was felt that the admission of in-patients by subscribers' letters was attended by many disadvantages, and it was also found that the free out-door dispensary was greatly abused; and two principles were ascertained—viz., that in-door hospital relief should be untrammelled and free, and that out-door dispensary relief should be administered on the provident system. In 1877 this double change was effected. The subscribers to the infirmary were asked to give up the privilege of recommending in-door patients, and they were given one ticket for every guinea subscribed, which entitled a patient to treatment at the Provident Dispensary. The infirmary gave up the premises it had occupied as a dispensary in a central part of the town to the new Provident Dispensary, and made it a grant of £500 a year in consideration of the patients recommended by its tickets being treated therein." The only out-patients now treated at the infirmary seem to be persons suffering from minor accidents, to whom no medicine is given. "Experience has proved that the step taken by the governors was a wise one, and especially so as regards the out-patient department. The number treated as free out-door patients in the year preceding the opening of the Provident Dispensary was 2695, and in the year following the establishment of the provident system the number fell to 679, every case being most carefully inquired into by the secretary." In discontinuing its out-patient work the Sunderland Infirmary is only reverting to the earlier practice of hospitals, and is setting an example which should have the serious attention of all hospital authorities at this time, when hospital administration is being so severely criticised.

THE BURIAL OF PAUPER HOSPITAL PATIENTS.

OUR Liverpool correspondent last week referred to an important question, which had just been raised at Bootle, respecting the burial of hospital patients who die in hospital leaving not sufficient funds to defray funeral expenses. It would seem that the guardians of the poor have refused to undertake the charge of burial in these circumstances, and the question therefore became one of some importance to the hospital authorities. In the end, as we understand, a settlement has been arrived at by which the guardians will contribute to the hospital funds a sum sufficient to defray the cost of such burials, and the arrangements will be carried out by the hospital authorities. So far as the parish of Bootle is concerned, it may therefore be understood that the question has been satisfactorily set at rest. But the difficulty is one that may arise in every parish in the land, and accordingly it is well that the rights of all parties should be clearly understood. The law upon this question is, unfortunately, in a somewhat unsatisfactory condition. In the year 1840 an action was tried in the Queen's Bench in which this very question came up for decision. It was then held by Lord Chief Justice Denman that the burial of such paupers as died within the parish, *but not in any parish house*, was not an object to which the poor-rates could be properly applied. In that case the president and officers of St. George's Hospital sought to fasten on the overseers of the poor for the parish of St. George the liability to bury the body of a pauper patient who had died under the given conditions. But as the poor-rate was not chargeable the overseer could not of course be made liable, and the decision of the Court was that the householder under whose roof the death had occurred must undertake the burial. Since that date, however, and probably in consequence of the decision thus rendered, the guardians or overseers of any parish have been especially enabled by the Poor Relief Act of 1844 to bury "the body of any poor person which may be within their parish or union, and to charge the cost of such burial to the parish to which such poor person was chargeable, or where he died." In terms, this is only an enabling clause, and it does not exonerate the householder from the duty cast upon him by the decision in the Queen's Bench. But it cannot be doubted that the intention of the Legislature was to give effectual relief in this way to hospitals or such-like charities. Even before this time it had been customary for the guardians of the poor to undertake burials in these circumstances, and it is plain beyond controversy that the Legislature contemplated a continuance under legal sanction of a practice which had grown up outside the law. It may well be doubted, therefore, if boards of guardians are in truth entitled to refuse the burden of burying pauper hospital patients. The doubt will hardly be removed until another hospital and another board of guardians go to law about the question, and that we should be exceedingly sorry to see. But if a legal doubt remains, the moral responsibility of the guardians is so clear that we should hope the practical difficulty will never again be seriously raised.

PERIPHERAL NEURITIS.

THE second number of the *Archives de Médecine Expérimentale* contains three papers bearing on the subject of peripheral neuritis. The first, by MM. A. Joffroy and Ch. Achard, adds one more to the growing catalogue of conditions associated causally with this affection. It is based on the record of a case in which well-marked symptoms—as persistent and severe pain, followed by muscular paresis, and wasting of all the extremities—occurred about nine months before the patient's death from an attack of cerebral hæmorrhage and pneumonia. Degeneration of nerve fibres was found in the main nerve trunks of the limbs in varying degree, but in all more marked in the peripheral nerves. In addition, there was found obliterating arteritis in the nerves—e.g., in the sciatic,—and it was to the resulting loss of nutrition that the "neuritis" was attributed. Indeed, a parallel is drawn between the changes thereby produced in a nerve trunk and those of cerebral softening from arterial thrombosis. It is remarked that, had the patient not succumbed to pneumonia, senile gangrene would have developed, and might have been referred erroneously to the neuritis; whereas both conditions would have owned the same origin—viz., obliterating arteritis. The next paper, by the same authors, deals with a case of tabes, complicated with cutaneous gangrene, in the left great toe, but with neuritic changes far more marked in the nerves supplying some of the other toes. Hence the writers do not attribute the gangrene to the neuritis, nor could they assign pressure as its cause; but refer the gangrene as well as the neuritis to the disease of the cord. Another factor

in the production of peripheral neuritis in this case was the presence of tuberculosis, from the effects of which the patient died. The third paper, by MM. Dejérine and Sollier, comes as an instructive pendant to the foregoing, since it deals with the subject of "peripheral tabes," to which M. Dejérine had previously drawn attention. The case was one of a man fifty-four years of age, who for fifteen years had suffered from incoördination of the lower limbs, marked lightning pain, and disturbance of sensation. The patellar reflex was, however, present. This patient also died from phthisis. The spinal cord and nerve roots were found to be healthy, but there was very marked peripheral neuritis, especially in the cutaneous nerves of the lower limbs, less marked in the muscular nerves, and slight in the cutaneous nerves of the hands. The sciatic nerves were quite normal. It is pointed out that the recognition of peripheral tabes, due to neuritis, involving mainly sensory nerves, is of practical value, since peripheral neuritis is often curable. The etiology of the case was obscure, neither alcoholism nor tuberculosis (although both had at one time or another been present) accounting for it.

CULTIVATION OF CINCHONA IN BENGAL.

THE increasing importance of the cinchona cultivation lends great interest to the report from the Government cinchona plantation and factory in Bengal. So much damage has been done to the plants in South America, upon which we were formerly mainly dependent for the supply of quinine and the other cinchona alkaloids, that they are no longer to be relied upon. The differences in their percentage yield of total alkaloid led to the official recognition of the cultivated plants of cinchona succirubra for the preparation of the various official compounds in which the employment of the bark was directed, while other natural and cultivated varieties of cinchona were recognised and introduced into the Pharmacopœia solely for the preparation of their alkaloids. In view of the gradual decline of the South American yield, it is extremely satisfactory to note from the report before us that for the present at least there need be no anxiety about the supply of quinine and cinchona bark of good quality. The year 1887–88 appears to have been peculiarly favourable to the cultivation; showers were abundant during the time of planting, and later, while the rainfall was quite up to the average, there was not an excessive fall on any one day, so that the plantation escaped damage from landslips, which had proved so disastrous in the previous year. A change of great importance which is gradually being effected is the substitution of the ledgeriana and hybrid varieties for the red barks, which, although rich in the inferior alkaloids, are comparatively poor in quinine. The plants raised from seed of the three varieties of cinchona calisaya—viz., verde, morada, and zamba morada—are now old enough to be appraised with some degree of accuracy, and it would appear that, though they are not identical with calisaya ledgeriana, they are not greatly inferior to it in their yield of quinine, and they have the advantage of being practically equal to each other in quality. They have the drawback of being more particular as to soil and situation, and they may prove to be a shorter-lived race, but their quicker and more robust growth is likely to more than counterbalance these disadvantages. A robust growing tree yielding a fairly good bark will usually show better financial results than a weakly constitutioned tree yielding a much richer bark. These varieties, like ledgeriana, are difficult to propagate by cuttings; seed will have to be depended upon for increasing their number to any great extent. The cultivation of species which yield the hard Carthagena bark of commerce and the cuprea bark is up to the present a failure. The work at the factory shows steady improvement, the out-turn of the drug being 6916 lb. of ordinary cinchona febrifuge, 1 lb. of crystalline febrifuge, and 331½ lb. of sulphate of quinine. With regard to the manufacture of sulphate of quinine, an important innovation has been introduced. For many years past experiments have been conducted with a view to the discovery of a mode of manufacture of sulphate of quinine capable of being profitably worked on the spot. Details of a plan involving the use of hot oil as a solvent were completely worked out, and this method was on the point of being adopted, when it was ascertained that with some slight modifications cold oil could be employed. It is found that, pound for pound of bark, the oil plan is more expensive to work than the old acid plan; but, whereas the acid plan yields barely two-thirds of the alkaloids contained in the bark, the oil extracts them to the last trace, and presents quinine in a highly crystallisable condition. Notwithstanding, therefore, the extra expense incurred in working the oil plan, it will show, owing to its efficiency, large profits over the cheaper but more wasteful acid plan. Samples of the quinine prepared by the new process have been reported upon by three professional analysts, and pronounced equal to the very best in the market, and perfectly pure. It cannot be doubted that in this method an important advance has been made. The report bears testimony to the zeal evinced by Dr. King, the director, and by Mr. J. A. Gammie, the acting superintendent, in their efforts to place the Government cinchona plantation and factory in Bengal upon a sound commercial basis, and to provide for the regular supply of a quantity of cinchona bark of such good quality.

THE PEABODY DONATION FUND.

THE twenty-fourth Annual Report has just been issued by the trustees of the Peabody Donation Fund. The report gives a satisfactory account of the progress and well-being of this important trust. The accounts for last year show that the net balance arising from rents and interest received during the year, after payment of all expenses, was very nearly £30,000, which, in accordance with the conditions of the trust, was placed to capital account. The operation of this constant accumulation of rents and interest had, by the close of last year very nearly doubled the princely bequests of Mr. Peabody between 1862 and 1873, amounting to £500,000; the amount standing to capital account on Dec. 31st last being £965,182. With the aid of additional money borrowed from the Public Works Loan Commissioners, and other sources, the trustees have made a total expenditure of very nearly a million and a quarter of money. The result of this expenditure has been the erection for the artisan and labouring poor of London of 11,275 rooms, besides bath-rooms, laundries, and washhouses. At the end of last year these rooms contained a population of 20,413 persons, in 5071 separate tenements; 76 of these holdings were of four rooms, 1789 of three rooms, 2398 of two rooms, and 808 of one room. The average weekly earnings of the head of each family in residence at the close of the year was £1 3*s.* 9*d.*; the average rent of each holding was 4*s.* 9*d.*, and of each room 2*s.* 2*d.* The report gives the following vital statistics of the large population residing during the year in these improved dwellings. The birth-rate was 39·6 per 1000, being 8·9 above that of the whole of London. The death-rate, including the deaths of fifty-nine residents of the buildings who died in hospital, was 18·5 per 1000, corresponding with the general rate in London. In judging of this death-rate as a test of the health condition of the Peabody residents, it should be remembered that the high birth-rate, and the consequently large proportion of young children, is more than balanced, in its effect upon the mortality, by the abnormally small proportion of elderly persons. It should, moreover, be borne in

mind that the population of the dwellings does not, in the statistics before us, bear its true proportion of deaths in workhouses, as such of the residents who succumb to the pressure of hard times probably gravitate to these Poor-law institutions indirectly; and it is an unfortunate fact that more than 10 per cent. of the deaths in London are recorded in workhouse institutions. It is satisfactory to find that the proportion of deaths under one year to births registered in this working-class population did not in 1888 exceed 127 per 1000, and was 20 below the general proportion in the whole of London. Such a fact speaks eloquently of the beneficent effect of Mr. Peabody's magnificent bequest to the people of London; and the steady accumulation of the fund forbids us to put a limit to the far-reaching effect of its agency upon the amelioration of the health and social welfare of the London population.

DIPHTHERIA AND THE HOSPITALS OF THE ASYLUMS BOARD.

APART from the increase of cases of diphtheria received into the hospitals of the Metropolitan Asylums Board, since the reception of such cases was sanctioned by the Local Government Board, it is interesting to note the fact that the disease seems to arise in some of these hospitals independently. At the meeting of the managers of the Board on Saturday last, there arose for discussion the Report of the Committee for the Northern Hospital at Winchmore-hill which had been appointed to consider the report of Dr. Bridges, Local Government Inspector, after a recent visit with special reference to the cases of diphtheria arising in this hospital in the year 1888. At the time of Dr. Bridges' visit the hospital contained 235 patients, mostly convalescent from scarlet fever. There were no less than 28 cases in the hospital in 1888. Of the 22 deaths which occurred among the patients during the year, 10 are registered as diphtheria and 4 as "membranous croup," which doubtless were also diphtheritic. Of the remaining 8, 4 were from measles, 2 from kidney disease, 1 from whooping-cough, and 1 from broncho-pneumonia. None of the 28 cases of diphtheria presented any signs of the disease on admission, though the managers suggest in their report that in 3 cases the disease may have been incubating. The incubation period varies from two to eight days, and is generally three. In 2 cases the disease showed itself two days after admission. The cases occurred in different houses, and were widely separated in time—facts which led Dr. Bridges to infer that none of them arose from contagion. The managers give the number of cases of diphtheria as 27, amongst a total number treated during the year of 3041—a percentage considerably less than 1. These facts are worthy of attention in view of the prevalence of this obscure disease, the more so when Dr. Bridges tells us that he has found that at the other hospitals diphtheritic symptoms have frequently occurred of late during the period of convalescence from scarlet fever. Of the 22 deaths, 16 occurred during the five cold months of January, February, March, November, and December. Dr. Bridges very properly remarks on the want of warmth in the dormitories during his visit. The temperature of the outside air was 38°, and that of the dormitories varied from 43° to 46°. Many of the children were between one and two years old, and in several of the rooms with this low temperature there were sick children; one in No. 11 had diphtheria; another in No. 5 had pneumonia. This is indeed a serious defect, and one which cannot be well dissociated from the mortality. The committee recommend that they be authorised to take tenders from engineers for schemes to remedy it, and it cannot be too soon remedied. There seems no fault in the drainage of the hospital. It is a difficult question whether this diphtheria is to be regarded as having some relation to the scarlet fever of the subjects in which it occurs. In private practice it is certainly not a very common complication, but hospital physicians seem to find it not uncommon. They would agree with Dr. Goodhart, who, in his little book on Diseases of Children, says: "Epidemics of measles, scarlatina, and typhoid occur in which diphtheria attacks many, so that some have thought it wanting in specificity, and capable of being bred out of these diseases. Its relationship to scarlatina appears to be unusually close."

THE HOUSING OF THE LIVERPOOL POOR.

ON the 6th inst., at Liverpool, the ninth presentment of insanitary property was made to the grand jury by Dr. Taylor, medical officer of health. The area condemned comprised two streets, consisting of about 180 houses, all of the back-to-back type, and mostly arranged in courts nine feet wide. Evidence was given as to the unfitness for habitation of these dwellings by Drs. Taylor and Hope of Liverpool, Dr. Littlejohn of Edinburgh, and by Mr. Shirley F. Murphy of London, who made an official inspection at the request of the corporation of Liverpool. The density of population on the area was shown to be 650 per acre, and the death-rate during the past three years averaged 46·5 per 1000, as against 17 per 1000 in the Victoria Buildings, with an equal density per acre. We are glad to learn that the condemned "dwellings" are forthwith to be demolished. We trust, at the same time, that the regulations as to new buildings in Liverpool will secure ample movement of air about new dwellings, both in the rear and to the front. The authorities of our large cities—and, indeed, of many smaller towns and villages, especially in the north—have been far too careless about this very important requisite of ample air space about human dwellings; and the result is found in a dense aggregation of houses on area, with consequent impairment of health. The system of building houses back to back is essentially a vicious one, and needs to be condemned wherever it is met with.

RESECTION OF THE ENSIFORM CARTILAGE.

AN important paper has recently been presented to the Royal Academy of Medicine and Surgery of Naples by a young surgeon, Dr. Rinonapoli of Collamele, in the province of Aquila, giving the details of an operation for resection of the ensiform cartilage. Only one such case has been previously recorded—by Linoli, in 1857. A man was injured by a horse rearing and falling back upon him. His chest was violently compressed, and the ensiform cartilage dislocated backwards. The displaced cartilage, by its pressure on the stomach, was productive of very severe gastric disturbance, which at length became so great that not even the smallest quantity of milk could be taken without terrible pain. The patient rapidly wasted away, and his life was despaired of. Various diagnoses were made, but it was left for Dr. Rinonapoli to discover the true state of affairs. Being convinced of the accuracy of his diagnosis, and, fortified by the opinions of two colleagues, Dr. Rinonapoli gained the consent of the patient and his friends to an operation. The minutest antiseptic precautions (carbolic acid and perchloride of mercury) were observed. An incision six centimetres long was made, the upper third being over the sternum. Dissection was carefully carried down to the peritoneum, which was not opened. The cartilage was separated from the structures enveloping it, and, finally, its attachment to the sternum was divided by passing a probe-pointed bistoury behind and cutting forwards. The wound was carefully cleansed and brought together by sutures. In the course of five weeks the patient had completely recovered. The

points of interest connected with the case are: 1. That it is only the second recorded. 2. The peritoneum was not opened. 3. It was undertaken by a young surgeon in a country district in Italy, who, with the assistance of two other country surgeons, carried it through in the most praiseworthy manner. Dr. Rinonapoli worthily won his admission to the Royal Academy of Medicine of Naples, for which Professor Fusci stood his sponsor.

THE SANITARY INSTITUTE.

THE Lenten Lectures for Ladies, which were so markedly successful last year, are to be repeated, and the programme is one which ought to prove interesting to any mistress of a house, whether *in esse* or *in posse*. Dr. Schofield is to lead off, on March 26th, with a discourse on Child Culture, which is to include both physical and mental culture. Mr. Wynter Blyth follows with two lectures (March 29th and April 2) on the Chemistry of Dairy Produce, with especial reference to milk, cream, butter, and cheese. Professor Lewes, of the Naval College, Greenwich, is to give a lecture on the Chemistry of Cleaning, a subject which is too little understood by householders, being one which cannot be adequately dealt with except upon a scientific basis. The fifth lecture, on April 9th, is on Bread, by Mr. Jago, the Examiner in Bread-making to the City and Guilds of London Institute. The sixth lecture, on April 12th, is on the Domestic Use of Petroleum, by Mr. B. Redwood, whose Cantor Lectures on this subject at the Society of Arts are well known. The subjects treated of in the above series of lectures are such as no properly educated mistress of a household can afford to ignore, and we trust that they will be well attended, for we must never forget that hygienic progress, without the assistance and co-operation of the ladies, is impossible. The Duchess of Albany is setting a good example by intimating her intention to personally patronise these lectures. On Tuesday evening Dr. B. W. Richardson, F.R.S., at the request of the Council of the Institute, gave a lecture on "The General History, Principles, and Methods of Hygiene," as an introduction to a course of lectures and demonstrations to sanitary officers.

THE ANATOMY OF CONGENITAL TALIPES EQUINO-VARUS.

DR. J. B. BISSELL, instructor in Orthopædic Surgery in the New York Polyclinic, has published an account of the dissection of the feet of a child aged five months and a half, who had been the subject of talipes equino-varus. His observations correspond to and confirm those of Messrs. Parker and Shattock, with some differences. He found it impossible to flex the foot after removal of the muscles and tendons, even after division of the whole of the internal lateral ligament, without separating some of the articulating surfaces; whilst they found that the position of the foot could only be rectified after dividing the anterior fasciculus of this ligament. Dr. Bissell found no bursa between the scaphoid bone and the malleolus, whilst there was one over the dorsal surface of the foot which Messrs. Parker and Shattock do not describe; neither do they mention a firm ligamentous band between the scaphoid and internal malleolus which was found in the feet examined by Dr. Bissell. From his investigations in this case, and comparison with numerous healthy feet of the same age, he comes to the following conclusions: 1. The shape of congenital equino-varus is due primarily to bone changes. 2. The varus is due to the elongation of the os calcis, to the excurvation of its outer face, to the extreme obliquity of the neck of the astragalus, and to the distorted position and shape of the scaphoid. 3. The equinus is due to the great increase in the depth of the anterior portion, and to the thinness of the posterior extremity of the astragalus. 4. The deformed foot is also retained in its abnormal position by the alterations in the ligaments, tendons, and fascia, these alterations being secondary to the changes in the bones.

PERIOD OF RESIDENCE IN INFIRMARIES.

THE average period of residence of patients in Scotch infirmaries is found to vary considerably, from 24·88 days in Dundee to 34 days in Glasgow Royal Infirmary. This matter is one of some importance, from its bearing on questions of adequacy of hospital accommodation, the number of patients which it is possible to pass through the wards in a year, the possible exclusion of deserving cases, and so on. It is therefore exciting some attention. From an article on the subject in the March number of the *Glasgow Medical Journal*, it seems that the method of computation of the average period of residence is not the same in all Scotch infirmaries. In Aberdeen and Edinburgh the formula employed is:—

$$\frac{\text{Average daily number} \times \text{number of days of year.}}{\text{Number treated to a termination} + \text{the number still in infirmary.}}$$

Applying this formula, it appears that in Edinburgh the average residence of each patient is 26·13 days; in Aberdeen, 28·29 days; in Glasgow Royal Infirmary (1887), 34 days; in Glasgow Western Infirmary (1886–87), 33·82 days; in Dundee Royal Infirmary (1886–87), 24·88 days. Residence in the Glasgow infirmaries is thus six days longer than in Aberdeen, eight days longer than in Edinburgh, and nine days longer than in Dundee. This is accounted for on various grounds: e. g., over-pressure on Glasgow infirmaries, leading to the rejection of less grave cases for want of room; and, above all, the want of associated convalescent homes. It is to be noted that in Dundee, with its short average residence, 31 per cent. of the patients pass to the convalescent home, where the average period of residence is three weeks; in Glasgow only 9 or 10 per cent. have the benefit of a convalescent home.

THE USE OF MEDICATED WINES.

WE referred recently to the difficulty experienced by the Inland Revenue officers in dealing with medicated wines, for which it would appear that there is a steadily increasing demand. It was found that as regards flavour, and also from the size and frequency of the dose recommended, many so-called medicated wines were intended for beverages, or might easily come to be so employed. These difficulties have been the cause of several prosecutions for retailing wines without an excise licence, and an appeal against the decision of the borough magistrates has already been dealt with at the Bradford Quarter Sessions. The position of the retail chemist is rendered very difficult by this decision, since he must now either decline to supply "medicated wines" other than those of the British Pharmacopœia, or he must protect himself against the risk of prosecution by taking out a wine licence, which would place him in the same category as the ordinary retailers of intoxicating beverages. In the course of some very sensible remarks in this connexion in the *Pharmaceutical Journal*, it is shown that this is inconsistent with the nature of a chemist's business, and that it might lead to undesirable development. On the other hand, it is contended that the proprietary makers of medicated wines should bear the onus of meeting the requirements of the Excise authorities. Considering the amount of alcohol present in many of these preparations, we should regret any increased facilities for their consumption except under proper medical supervision. It is quite possible that habits of intemperance may be unconsciously fostered by their use; while the plea that the wine is a medicine and that it was obtained from a

chemist is very hard to meet. Without questioning the medicinal value of some of these preparations, we would earnestly warn the profession against the risks attendant upon their lavish employment. Most of the cases which have formed the subject of prosecution have been defended upon the grounds of ignorance of composition and of urgent demands from customers.

THE PENSIONS OF IRISH POOR-LAW MEDICAL OFFICERS.

DRS. J. H. CHAPMAN and L. H. ORMSBY, hon. secretaries respectively of the Irish Medical Association and Dublin Branch of the British Medical Association, have, by direction of their respective Councils, written to the Right Hon. A. J. Balfour, M.P., Chief Secretary for Ireland, bringing under the notice of Government the serious grievances suffered by the Poor-law medical officers of Ireland in consequence of the very unsatisfactory state of the law which deals with their superannuation allowances. The joint Councils are prepared and desire to submit evidence, either oral or written, proving that the medical officers of the Poor-law service in Ireland have in a very large number of instances been refused any retiring allowance whatever, after service of an official lifetime, even though their services were admittedly faithful, zealous, and efficient. The law as it now stands gives to Irish boards of guardians a discretionary power of granting or refusing retiring allowances to medical officers. The joint Councils in their letter to Mr. Balfour urge the introduction by Government of a measure to afford *compulsory* superannuation allowances, and to that end express an earnest hope that Government will reintroduce in Parliament this session the Union Officers' Superannuation (Ireland) Bill of April 5th, 1883.

SUMMER DIARRHŒA IN INFANTS.

IN a paper read before the New York State Medical Society, Dr. Emmett Holt pointed out the frequency with which follicular inflammation and ulceration occur in children, and doubted whether an intestinal catarrh were ever salutary, but that in all forms of "dyspeptic catarrh" care should be taken to prevent their further development into follicular enteritis. He would lay stress on the following points: avoidance of over-feeding, especially in summer; early attention to intestinal catarrh, which, however mild, may precede severe disease; and held that the anatomical changes in the intestine in diarrhœal diseases are more to be considered than the bacteria and the products of decomposition.

THE HENDON COW DISEASE.

THE controversy about the true nature of the Hendon cow disease which was alleged to be the source of a scarlatina epidemic has, it appears, not been allowed to close with the recent publication of Professor Brown's report to the Privy Council. An able criticism of this report is published in the current issue of the *Practitioner*, in which a vital point in Professor Brown's argument is very aptly shown to be fallacious. It may be remembered that a good deal of that argument was based on the circumstance, the discovery of which was attributed to Professor Axe, that scarlatina prevailed at the time of the outbreak of the cattle disease in the neighbouring dwellings, and that there was a strong probability of the milk from the Hendon cows having been infected from a human source. But the writer of the *Practitioner* article points out that the statement of Professor Axe, on which the report relies for this opinion, is a verbatim rendering of the report of Dr. Cameron, published shortly after the occurrence of the epidemic, with the remarkable and notable omission of the additional statement that the fever did not spread beyond either of the two infected houses. The inference that scarlet fever prevailed in the *district*, and that for weeks there was a liability to contamination of the milk-supply, is therefore held to be unjustifiable and far-fetched. There are further criticisms upon the report—for instance, the apparent confusion existing among the veterinary profession as to the real nature of the Hendon disease; but none seem to go so much to the root of the matter as this correction of a misapprehension as to the extent of the scarlet fever prevalent in the Mead, which was known to Mr. Power and excluded by him as a source of the Marylebone epidemic.

MEMORIAL PORTRAIT OF SIR W. JENNER, BART.

BY the courtesy of the Executive Committee, we have received from the hon. secretaries of the memorial an autotype engraving of the late Mr. Frank Holl's portrait of Sir William Jenner, Bart., K.C.B., M.D., along with an expression of the thanks of the committee for the "valuable assistance" rendered in the pages of THE LANCET.

PULMONARY SYPHILIS.

IN commenting upon a case of lung disease (*La France Médicale* No. 27) of two months' duration with signs of consolidation at the right base, M. Potain concludes that the diagnosis of the syphilitic origin of the condition was fairly warranted. The case was apyrexial, there were no apical signs, and the patient had formerly contracted syphilis. At the same time he admits the rarity of observations on the subject, and states that a Russian author (not named), among 21,757 post-mortem examinations, found syphilis in 2·3 per cent. Visceral syphilis was only present in eighty-eight cases, and in eleven of these there were pulmonary lesions. He also affirms that pulmonary syphilis always attacks the right side. The lesions met with in the lung are—gummata, or sclerosis, the latter being marked by thickening of the alveolar walls and accumulation of epithelium within the alveoli; or there may be a combination of these two lesions, or the gummatous change may take on the character of a diffuse infiltration. There is also a condition described as "white hepatisation." As a rule, the middle portion or apex of the lung is the seat of the syphilitic change; but in about one-fifth of the cases the lesions may be limited to the base. The presence of gummata alone may not be revealed by physical signs, but, as with tubercle, they may excite inflammatory changes around them. Perhaps further diagnostic aid might be gained by the detection in the sputum of Lustgarten's bacillus, but M. Potain does not seem to lay much stress on this, and points out that the microbe, if such there be, is not likely to be found in the stage of simple congestion or of non-softened gumma.

EMPLOYMENT OF BEES BY MALINGERERS.

A NOVEL form of malingering is described by Dr. Klose of Oppeln as having occurred amongst young men who wished to escape military service. The principal case was a greatly swollen and œdematous scrotum, which presented very much the appearance of an immensely distended prepuce. No marks of injury could be detected. The man first said that he had fallen on some branches of trees; at a subsequent period, when he was called to account for malingering before a magistrate, he said that when going to stool he had fallen amongst some nettles. He did not of course explain how it was that the nettles affected nothing but the scrotum. Fortunately the medical authorities had received a hint as to the means which had been adopted through an anonymous letter. It turned out that this man,

as well as another who had presented himself before the commission for three successive years with a swollen knee, had taken bees in a torpid condition (the commission held its sitting in March), put them on the part of the body to be affected, and brought them back into an active condition by breathing upon them, so that they regained their stinging capacity.

A TRACHEOTOMY TUBE IN THE BIFURCATION OF THE BRONCHI.

A SOMEWHAT remarkable case is reported by Professor Pieniçzek in the *Przeglad Lekarski*, where a caoutchouc tracheotomy tube, which had been inserted ten years previously, suddenly slipped and fell down the trachea so as to be completely lost to sight. At first the patient, who was an elderly man, coughed violently, but after a little while the irritation entirely ceased, and though he could feel the presence of the foreign body at the third and fourth costal cartilages on the right side, it did not occasion him any serious inconvenience. It had remained *in situ* about seven weeks when it was removed. In order to accomplish this the patient was chloroformed, and as sufficient anæsthesia for the purpose was not procured by this means, the mucous membrane was painted with a 25 per cent. solution of cocaine. By means of a laryngoscopic mirror introduced into the laryngeal opening, the foreign body could be distinctly seen and its position made out. It was lying at the bifurcation, its convexity upwards, and its larger end directed towards the right bronchus. With the help of the mirror, a blunt hook was passed down to the tube in such a manner that it was caught up and so extracted. Professor Pieniçzek remarks that it would have been almost impossible to secure the tube without the aid of the mirror, as its position could not otherwise have been determined, and without an exact knowledge of this any manipulation with instruments would have been dangerous and probably useless.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE resolution to purchase the house No. 20, Hanover-square, and to transfer their library thither from Berners-street, where it has been established so many years, was confirmed by the Fellows of the Royal Medical and Chirurgical Society at a special general meeting on Monday last. The funds needed for this step are being rapidly raised by the issue of bonds of the value of £50 and £100 among the Fellows of the Society, for which, we understand, immediate application is desired. It is to be hoped that the bonds will be distributed among the majority of the Fellows, for a large number of holders of small sums would be preferable to a few large holders. We should like to hear that almost every Fellow had given practical evidence of his interest in the welfare of the Society by sending in his name for at least one bond of £50.

PAUPER NURSING IN ISLINGTON.

WE recently referred to a letter addressed by the Local Government Board to the Islington guardians, urging upon them the desirability of providing a staff of trained nurses for the poor in their workhouse on the same scale as adopted in other Poor-law establishments in the metropolis. A correspondent informs us the paragraph is founded on a misapprehension, as there is a trained nurse in every ward, and the scrubbers and helpers are chosen from the able-bodied young pauper women. He contends that the present system works well, that the wards are admirably kept, and the patients well nursed. Without inspection and greater knowledge of the details we could not offer an independent opinion, but our knowledge of the nursing administration of Poor-law institutions leads us to sympathise with the choice of employment of skilled persons for attendance on the sick.

STATISTICS OF ABDOMINAL AND PELVIC SURGERY.

M. PÉAN, in presenting to the Academy of Medicine the sixth volume of his Clinical Surgery (St. Louis Hospital), said that the third part contained statistics of 182 gastrotomies performed by him, from Jan. 11th to Dec. 31st, 1886, which brings up to a total of 945 such operations from 1864 to 1887. Of these 182 operations, 71 were for the removal of tumours of the ovaries, tubes, and broad ligament (68 by abdominal and 3 by vaginal operation), and only one of these failed; 90 for uterine tumours—23 hypogastric (3 deaths), and 67 vaginal (1 death). The remainder were distributed as follows:—For tumour of mesentery, 1 (fatal); of peritoneum, 4 (1 death); of intestine, 1; of abdominal wall, 1; of kidney, 4 (1 death; of liver, 2; of pelvis, 7 (3 deaths); of iliac fossa, 1 (fatal). Thus there was a gross total of 170 successful and 12 unsuccessful operations.

PRESENTATION TO MR. HENRY SMITH.

ON Thursday afternoon, at a meeting in the operating theatre of King's College Hospital, Mr. Henry Smith, F.R.C.S., was presented with a silver salver, a complete dinner service of silver plate, and an illuminated address containing the names of the subscribers to the testimonial. A large number of past and present students, including Surgeon-General Cockburn, Messrs. Teale, Clarke, Wakley, Fox, Rose, Barrow, Drs. Duffin, MacDonald, Curnow, Pritchard, and others, assembled, and Mr. Napper of Cranley, made the presentation on behalf of the committee, in a most humorous and kindly speech, to which Mr. Smith most feelingly replied. The following inscription was engraved on the salver:—"This salver, together with other articles of silver plate, was presented to Henry Smith, F.R.C.S., by his former house surgeons, pupils, and friends, as a mark of esteem and affection, on the occasion of his retirement from the chair of Surgery at King's College and the post of Surgeon to the hospital. March, 1889."

THE DIAGNOSIS OF HERNIA.

DR. MULTANOVSKI suggests the addition of a new diagnostic sign to the classical method of diagnosing abdominal hernia. Having made observations on 152 cases of hernia in Professor Bogdanovski's wards, he states that in all these, when the finger was passed up into the abdomen, a more or less tightly stretched strap-like band could be detected connecting the contents of the sac with those of the abdomen.

EFFECT OF SLEEP ON THE GASTRIC JUICE.

SOME investigations which have been recently carried out in Professor Manassein's wards in St. Petersburg by Dr. S. L. Rappoport on the effects of sleep on the secretion of the gastric juice are published in the last few numbers of the *Vrach*, and tend to show that the digestive functions of the gastric juice are materially affected by sleep. The experiments were made on the human subject, the gastric juice being withdrawn by means of a flexible indiarubber œsophagus sound, the introduction of which is said not to have caused any inconvenience to the subjects of the research. The quantity of the gastric juice secreted during sleep was shown to be very much less than that secreted during waking hours; the chloride of sodium, as well as the hydrochloric acid, were diminished; but the secretion of pepsine did not seem to be much affected. By means of

experiments conducted in the laboratory, it was found that the digestive power of gastric juice secreted during sleep was lower than that secreted during waking hours, the difference apparently depending mainly upon the lack of hydrochloric acid. With regard to the rennet ferment, Dr. Rappoport was unable to demonstrate any alteration in its secretion during sleep.

DIAGNOSIS OF PERICARDITIS.

M. PUIS of Vienna (cited in *La France Médicale*, No. 27) has drawn attention to the presence in pericarditis (with effusion?) of a limited strip of dulness posteriorly extending from two fingers' breadth above the angle of the scapula to two fingers' breadth below the inferior border of the lung, and limited by the spinal column on the right. Bronchial breathing, bronchophony, and increased vocal vibration occur over this area. But when the patient is in the prone or knee-elbow position, the dulness is replaced by a tympanitic note, the bronchial breathing disappears, and friction becomes audible.

MEDICAL COUNTY COUNCILLORS.

WE have been asked to insert the following additional results:—

Derbyshire.—Dronfield: Samuel Rooth, M.D.

Glamorganshire.—Penygraig: Evan Naunton Davies, Esq., M.R.C.S. Eng., &c.

ALDERMAN.

Henry Naunton Davies, Esq., L.R.C.P.Lond., &c., has been elected an alderman for the county of Glamorgan.

THE BACTERIOLOGY OF TETANUS.

ON the 8th inst., before the Royal Medical Academy of Turin, Drs. Belfanti and Pescarolo gave an interesting report of their later studies on the bacillus tetani. Quite recently they have been able to isolate the same micro-organism already discovered by them and described to the Academy in May, 1888; and they have found that in their experiments Nicolayer's bacillus produced neither tetanus nor death, while the mixtures made from pure cultures of the three bacilli—to wit, their own, Nicolayer's, and Rosenbach's,—if they produced death, did not develop tetanus.

FOREIGN UNIVERSITY INTELLIGENCE.

Buda-Pesth.—Professor Victor Babes has decided to resign his chair, with the intention of remaining in Roumania. Arrangements are being made for giving dental instruction in the University.

Ghent.—M. Eeman has been appointed Extraordinary Professor of Laryngology and Otology.

Gratz.—Dr. Birnbacher has been promoted to be Extraordinary Professor of Ophthalmic Surgery.

Halle and Marburg.—The Prussian Lower House has overruled the report of the committee on the budget, which proposed to strike out the vote for the teaching of hygiene. Consequently these two universities will now have properly constituted professorships and institutes of hygiene, like the other universities of the German Empire.

Lausanne.—Dr. Rabow, formerly assistant in the Strasburg Medical Clinic, now one of the editors of the *Therapeutische Monatshefte*, has been appointed Professor of Mental Diseases.

Lille.—M. Lambling has been appointed to the Professorship of Organic Chemistry.

Lyons.—M. Lortet, Professor of Natural History, has been reappointed Dean for three years.

Paris.—A new laboratory for Physiological Pathology is to be established at the École Pratique des Hautes Études in connexion with the chair of Organic Chemistry in the Collège de France. Monsieur F. Frank has been appointed director.

St. Petersburg (Military Medical Academy).—Dr. Kurloff has been recognised as *privat-docent* in Medicine.

Valencia.—Señor Don José Antonio Masso y Llorens, Professor of Therapeutics in Granada, has been appointed to a similar chair in Valencia.

Vienna.—Dr. Ernst Ritter von Brücke, Professor of Physiology, being in his seventieth year, will retire at the end of the present session.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following eminent foreign medical men are announced:—Dr. Gorlitsyn, Medical Inspector of the Estland Government, one of the Russian Baltic provinces; Dr. Brasseur, President of the Paris Odontological Society; Dr. Vasili Ulyanin, Professor of Comparative Anatomy and Embryology in Warsaw.—M. Martins, Professor of Botany in Montpellier.—Dr. Pedro A. Pardo, Argentine Minister at Lisbon.

Pharmacology and Therapeutics.

VAPOROLES FOR INHALATION AND FUMIGATION.

WE have had submitted to us twelve varieties of the vaporoles prepared by Messrs. Burroughs, Wellcome, and Co. They are of several sizes, as they enclose varying quantities of different medicaments, ranging from two and a half minims to thirty minims, the quantity in each case representing that required for inhalation. They consist of a delicate glass capsule enclosing the drug, and around this is a thin covering of cotton-wool surrounded with a silken sac of attractive appearance. The glass capsule is readily crushed when necessary, and may be conveniently used for inhalation or fumigation. We have carefully tested many of these vaporoles, and have derived much satisfaction from their employment. The following is the list of drugs at present prepared in this form: 1. Carbolic acid. 2. Ether. 3. Amyl nitrite. 4. Compound tincture of benzoin. 5. Chloroform. 6. Creasote. 7. Cubebs and lemon. 8. Tincture of iodine. 9. Juniper. 10. Terebene. 11. Pinol. 12. Eucalyptus. By these preparations the trouble of measuring the quantity required for each fumigation or inhalation is obviated, and they are a distinct advance for simplicity and elegance.

SACCHARIN AS AN ANTISEPTIC.

According to an article in a French medical journal, saccharin may be very usefully employed as an addition to mucilaginous and other solutions, which are apt to develop fungi, as it enjoys the property of preventing the formation of low organisms, even when it is present in only very small proportions. A strength of 1 in 500 is sufficient to prevent the development of staphylococcus pyogenes aureus, and a strength of 1 in 200 the development of B. termo. Thus a valuable but inexpensive dentifrice may be prepared by simply dissolving saccharin in water to the proportion of 6 per cent. A teaspoonful of this in half a pint of water forms an admirable antiseptic mouth-wash. In cases of malignant or other disease of the stomach requiring the washing out of that organ, a solution of saccharin of the strength of 2 per cent. will, according to this authority, be found very suitable. As a quantity of twenty centigrammes, or about three grains, can be taken during the day without detriment to the digestive functions, the addition of the minute amount necessary to render mucilaginous solutions permanent cannot be regarded as in any way injurious.

LOCAL TREATMENT OF DIPHTHERIA BY CALOMEL.

Dr. Gustav Elwert of Reutlingen has found great benefit from the local application of calomel in cases of diphtheria. His idea was that, if calomel could be brought into contact with the diphtheritic membrane, the chloride of sodium in the saliva would act upon the mercury salt and produce corrosive sublimate in minute quantities, which might, however, be sufficient to act as a bactericide to the virus

in the membrane. His plan is to mix calomel with two or three times its weight of powdered starch, and to brush out the pharynx lightly with a feather dipped in this powder. This is done three or four times during the day and two or three times during the night. Cold-water compresses are applied to the throat, and a mixture containing nitrate of sodium is prescribed for internal administration. The effect of the treatment is soon apparent in the diminution of the membranous patches and of the foul odour, and, where the disease has invaded the larynx, in the decrease of the hoarseness of the voice.

GLYCERINE IN OZÆNA.

In a communication published in *Der Militärarzt*, Dr. Sidlo mentions the great benefit he obtained in a case of ozæna of the most repulsive kind by treating it locally by means of injections and applications of glycerine. The patient had suffered from an affection of the nose some two years previously, which had been followed by the complete loss of the sense of smell and by repeated attacks of epistaxis. Upon examination, the cavities of the nostrils were found to be filled with foul scabs. Daily syringing with a 2 per cent. solution of chlorate of potash, with 10 per cent. of glycerine, was ordered, and cotton-wool soaked in a 25 per cent. solution of glycerine in water was introduced once or twice a day and allowed to remain for an hour. Under this treatment, not only did the foul odour rapidly disappear, but the patient regained his sense of smell.

THE LOCAL EMPLOYMENT OF HYDRASTIS CANADENSIS.

Dr. Felsenburg of Vienna strongly recommends the local employment of the fluid extract of hydrastis canadensis in chronic pharyngitis, whether combined with enlargement of the tonsils or not. Having employed frequent daily swabbings out of the throat in a large number of these cases, he found that great improvement both externally and in the subjective sensations invariably followed very quickly. He suggests that similar treatment might be found beneficial in chronic inflammatory affections of other mucous membranes.

REPORT OF THE LANCET

Special Sanitary Commission

ON THE

CHAIN AND NAIL MAKERS OF CRADLEY HEATH AND NEIGHBOURHOOD.

PART II.

FURTHER on, in Cradley Heath, we came upon an irregular series of cottages and workshops, in a locality which cannot be described as courts, lanes, or squares; it was a sort of Black Country semi-rural slum, consisting of unpaved passages, where, in wet weather, the foot sinks ankle deep in black mud; squares without a vestige of grass, filled with mounds of dirt and earth, and with drainage slowly winding its way through the hollows formed by the irregularity of the soil. Here and there, in the midst of this squalor, there is a well. One of these wells, opposite a public-house, was covered by a stone; nevertheless, there were openings large enough to let some of the surface drainage run into the well water. At first the neighbours to whom we spoke acknowledged that they drank this water. Then, alarmed at our persistent questioning, they denied that they did so, and pointed to the tap water from the water company as furnishing their drinking supply. Nevertheless, they had previously extolled the delicious quality of the well water. A little further down the slope on which we were then standing we found another well by the side of a row of smithies. It was only half covered with rotten pieces of wood; a small child could easily fall in. Here the people frankly confessed to drinking the water from this well, though there are ashpits close at hand. But they complained that the water from several of the neighbouring wells had recently disappeared; it was drained away as the soil subsided through the collapse of abandoned coalpits below. The smithies in the neighbourhood of this well were falling to pieces from the same cause. In one of these, which had a hole in the roof large enough for a person to pass through, we found an idiot child, dressed in dirty rags and fragmentary clothing, watching a buxom young woman with rosy cheeks and stout arms, making chains. The cheerful and healthy look of this young woman was so unusual that we were led to question her. An explanation was soon forthcoming. She only worked at chain-making three days a week; the rest of her time was employed in cleaning, for which she got much higher pay; therefore she endured less fatigue, and had better food than the ordinary chain-maker. In the centre of a large and hilly square or yard we came upon another well, covered over by a decaying barn door, which was held down over the aperture by a heavy stone. Inside the well, jutting out of the water, might be seen the remains of the previous covering, and on all sides, dripping from the bricks of the well wall, the surface drainage was oozing through. When the dirt that lies on the ground all around is examined the danger of contamination becomes obvious. Entering one of the houses nearest to the well, we found that the brick flooring was worn away and the earth coming through. The mortar and plaster were falling off the side wall in consequence of the damp. Upstairs, in the bedroom, there was a tub to catch the water that came through the roof. Six persons slept in two very small rooms. They have three chairs between them, two rickety bedsteads, and some dirty rags, but no bedding. For seventeen years this cottage has been inhabited by the same tenant, and nothing has been done to improve its deplorable condition. In a house close by, equally small, ten persons slept in two little rooms, and when, finally, they left to occupy a larger place, their bedding, such as it was, was so dirty that it had to be burnt. The inhabitants of the district complained that they never received the visits of any inspectors, that nothing was done to improve their wretched lot, and no force brought to bear to compel the landlords to keep the tenements in proper order. One workshop close by had sunk a yard below the level of the thoroughfare, so that it was very difficult to enter through the door, as this aperture is now only about four feet high, and of course the workshop is extremely damp.

Cradley, which is under a different sanitary authority, occupies a better topographical position than Cradley Heath, for it is built on a hill. Then there are ironworks for manufacturing very heavy chains and anchors, where men only are employed, and this at a much better rate of wages. But there are also districts given over to the making of small chains, where women work, and here the general condition of affairs is perhaps even more deplorable than at Cradley Heath. The suffering has also been greatly intensified by the outbreak of a severe epidemic of typhoid fever. This commenced last December, and there have been some sixty cases. In the main street, within about twenty yards, and immediately below the church and cemetery, stand the village pump and well. Some five or six years ago a similar epidemic occurred. All the medical practitioners in the neighbourhood agreed in condemning this well water. A sample was sent to London, but on analysis this particular sample seemed to be quite pure; so the Board of Guardians, who have jurisdiction in this matter, allowed the continued use of the well. When, last December, cases of typhoid fever were again reported, the water was once more examined, and this time found to be highly contaminated; so at last the handle has been removed from the pump, and the local water company's supply laid on instead. This obvious precaution was, however, taken too late, and there are also other wells close at hand that are not yet closed.

The dwellings of the poor at Cradley have been scandalously neglected for many years; though during the last few months, since the public agitation on the condition of the district, some slight improvements have taken place. A few cottages have been whitewashed, and a few ashpits have been walled round, so that their contents cannot so easily be blown about. Some cottages, built on the slopes, are extremely damp. A portion of the walls resting against the earth of the hill side is always damp, and fungus growths may be discerned adhering to the masonry within the dwelling-rooms. Surface drains are to be seen in all directions. Some of the houses drain into one of the main streets. There are holes in the walls about three feet above the level of the street, and bits

of tin plate are suspended over these holes to prevent people being splashed by the slops that flow through. Under one of these houses, where there is at present a case of enteric fever, we noted a large surface drain, which was wearing away the base of the house wall and saturating the subsoil. In one house, where a death from enteric fever had recently taken place, there were six persons occupying two very small rooms, and their closet or ashpit was in a very exposed position, and used in common by a large number of people. Another death occurred in a house which shared its closet with the inhabitants of three other houses. In the two small bedrooms of one of the cottages inspected the water came through the roof to such an extent that it had literally to be bailed out; the doors would not close properly; there were draughts and damp on all sides. In the larger bedroom the father (now ill), the mother, and an elder daughter sleep; while in the little back room, which cannot be reached without passing through the larger room, sleeps an adult son. There is not a single chair, and the whole scene was extremely wretched. For seven years the same tenants have occupied this house, and nothing has been done to improve its dilapidated condition. Another cottage, inhabited by a family of six, had been left nine years without any sort of repairs. Some of the cottages had bedroom windows that measured only 32 in. by 29 in. In one of the cottages, with a window of this description, we found the husband, wife, a grandmother, and six children, all sleeping in two little rooms, and the wife had recently been confined. Just outside, and surrounding half the house, there was an open and offensive drain. Another cottage, which had been inhabited by eleven persons, but was now only occupied by seven, professed to have two bedrooms, but practically it was only one room, the back portion being divided off by a wooden screen without a door. The ceiling was falling in, and there was a hole in the lathes and plaster big enough for a man to pass through. In this miserable place seven persons slept, and one of them was a daughter twenty years old. The cottage next door was, we were informed, equally small, and inhabited by eleven persons. The tenants of these places at Cradley, thus briefly described, were engaged in chain-making. Outside and around their cottages stand the smithies or workshops, a few dilapidated washhouses, and some ashpits. These structures seem to have been built without any preconceived plan or order. No effort is made to drain, pave, and keep the ground dry. Slops are thrown out recklessly anywhere, and as often as not run against the side of the house.

In answer to these strictures, it may be urged that the death-rate throughout the chain and nail making districts is not high. This is true; but there are no statistics relating specially to the chain and nail makers, who, after all, represent only a section of the population. On the other hand, the infant mortality is very high. For the Worcester portion of the union, which comprises Cradley, there were in 1887, in all, 557 deaths; of these, 213 were under one year old. Above five years of age, 257 persons died; and under five years, 300. Thus the child mortality under five years was more than 50 per cent. of the deaths, though the general death-rate is set down at 17 per 1000. This for a semi-rural district cannot be considered very good. Later statistics are not yet available relating to Cradley. For the parish of Rowley Regis, including Cradley Heath, we have more recent figures from the medical officer of health. The rate of mortality at all ages is stated to have been 16·5 in 1886, 16·3 in 1887, and 18·2 in 1888; but it does not appear whether these rates include the deaths of residents of the district occurring in the Union Workhouse. The large excess of child mortality in the district is, however, shown by the following figures:—No less than 56 per cent. of the mortality in these three years was of children aged under five years, 37 per cent. being of infants under one year, and 19 per cent. of children aged between one and five years. We have for the three years the mortality under five years represented by the figure 28·5, as compared with the 40 per 1000 representing the general mortality. In the borough of Dudley there were last year 859 deaths, 414 being under the age of five years; but in certain districts of this borough the infant mortality was much higher. In the ward of St. Thomas, for instance, there were 60 deaths under five years, and only 46 above that age; in the Castle ward, 97 under five, and 62 above; in St. John's, 62 under five, and 49 above that age.

When we find that in some of the chain and nail making districts two out of three children die on an average before reaching their fifth year, it is quite evident that the general death-rate, if low, is still much higher than it should be. Thus bad sanitation, and a grinding poverty which compels mothers to work instead of attending to their children, have brought about the usual result—a large and preventable waste of life.

The mortality among adults is not particularly high, because, presumably, they were brought up when the wages earned were 40 to 50 per cent. higher than at present. Nevertheless, medical evidence goes to show that the women do suffer from the heavy character of the work in which they are engaged. Displacement of the uterus is very frequent, and spinal mischief is occasionally noticed. This is perhaps caused as much by the carrying of heavy bundles of nails and chains, weighing from 53 lb. to 112 lb. to and from the warehouses as by the actual chain and nail making. The accouchement of these women workers is always a matter of risk and difficulty. False presentations constantly occur, and it is very often necessary to use instruments. This difference was particularly mentioned by one of the medical men who had previously had large practice among women engaged in the boot trade of Northampton. With the latter he was rarely compelled to employ instruments. When we discussed these matters with the women themselves, we found that they were all in favour of extending the Factory Act, so that it should deal with their smithies, and limit the hours of labour for men as well as for women. With one exception, they made no objection to the total abolition of women's work in chain and nail making. They seemed to feel that they were neglecting their children and their domestic duties, and that if men only worked at the trade much better wages would be paid. One woman, however, objected that it was better for a girl to work at a smithy close to her home than to be shut up in a factory. In the former case she was able occasionally to help in domestic duties, and would learn to sew and mind the younger children. Such argument only enabled us to realise the hard lot of the women who in the smithies toil beyond their strength, and then, instead of resting, have to do all the domestic work in what should be their hours of leisure. It is not surprising that they look so thin, so worn, so pale—mere shadows of what a woman should be; flat breasts, horny hands, bony sinewy arms, sharp angular shapes, that have lost all the charm, beauty, and rotundity of womanhood: a picture of squalor and despair, of depression and starvation, that should shame our civilisation, sting our conscience, and stir to their highest pitch the energy and devotion of every lover of humanity.

THE TREATMENT OF LOCOMOTOR ATAXY BY SUSPENSION.

Ignotum per ignotius. This maxim applies to most, if not all, therapeutic agencies, but to some in much greater degree than others. The new method of treatment of locomotor ataxy now advocated by Charcot and his disciples is an illustration of this maxim. But we do not on that account ignore it, only it is necessary with so powerful a means for good or evil to try it with caution and test it with sceptical judgment. In estimating the good or evil effects of treatment, it is most necessary to have regard to the natural history of the disease. Many individuals are under the impression that once the diagnosis of locomotor ataxy has been pronounced by a competent authority there must be an end to all hope. This view is entirely erroneous. Physicians of experience can quote cases of stationary tabes dorsalis by the score, and stationary at any period of the disease, from its first dawn to its last flicker. Cases are also known in which positive recession of the disease, and even considerable improvement, if not practical recovery, either with or without treatment. On the other hand, cases may steadily descend from bad to worse; but a slow and steady progression is by no means the rule, long intervals of slowly progressive impairment may be broken by short sharp shocks of sudden deterioration; indeed, the variety of the clinical history of these cases is as complicated as the imagination could picture. The fact

that tabes dorsalis may grow suddenly worse is of importance in considering the value of the suspension treatment, because at least one case has been referred to as having been made worse by the treatment. It cannot be too strongly urged that the utmost care is necessary in commencing the treatment, and it is possible that suspension without the aid of the armpit straps is too violent a measure at any period in the treatment of the disease.

At the invitation of Dr. de Watteville, we have had an opportunity of examining one of the cases under his care at St. Mary's Hospital, the said patient having been under treatment by suspension for six weeks, being, we are informed, the first patient in England on whom the new means of treatment has been tried. In regard to this case no doubt of the nature of the affection can exist, though whether the disease is due to a condition of the nerves or more central fibres in the cord and brain cannot be decided. The patient is a man aged thirty-nine, married, and a carpenter by trade. He is said to have had rheumatic fever ten years ago, and at times since; but questioning the patient left it doubtful whether these symptoms were not of spinal origin, and therefore signs of the disease from which the man still suffers. In 1877 the patient remembers to have first noticed something wrong with his legs, and in the Christmas of that year he caught a severe cold, which laid him up all through the summer of 1878. In 1879 he suffered from vomiting and diarrhœa, began to see double, and the legs became worse; then shooting pains made life miserable, bladder troubles set in, and the disease steadily advanced. At the present time the man is somewhat anxious-looking and very thin. He could not stand at all with his eyes shut, but he can now, although unsteadily. He was very much more steady both in walking and in working at his trade than he had been previously to the commencement of the treatment by suspension. He had not been able to walk at all without the aid of two sticks for many months before January of this year, but he recently walked three miles and a half without experiencing a sensation of fatigue. The improvement in the gait has been slowly going on during the treatment. Another important amendment has been the almost entire disappearance of the lightning pains. Since the treatment has been begun there have been nocturnal erections of the penis, which had not been the case for years. These erections partake of the nature of "spermatic crises" so characteristic of spinal cord disease. Charcot has noted them in his series of cases treated by suspension. That this patient has been benefited by the treatment neither Dr. de Watteville nor others who have followed the case throughout have any doubt. The man himself also feels much improved by it. Suspension has been practised for from thirty to fifty seconds twice a week, axillary straps being always used. Dr. de Watteville is of opinion that suspension by the head alone should never be practised until the other mode has been frequently practised first.

In conclusion, we may say that in the present early stage of the trial of the remedy it is obvious that caution must be exercised in forming an opinion of its efficacy.

INEBRIATE CRIMINAL RESPONSIBILITY.

A LECTURE on Inebriate Criminal Responsibility was delivered to the Society for the Study of Inebriety, at the rooms of the Medical Society of London, on Tuesday last, by the President, Dr. Norman Kerr.

The lecturer reviewed the varying criminal procedure of different countries in criminal cases complicated with inebriety. Germany, Italy, and Switzerland recognised a culpable and inculpable intoxication; America, England, and France did not. Yet in America the confirmed was practically dealt with as a diseased drunkard, and capital punishment was averted by a verdict of "murder of the second degree." In England, Plowden in the sixteenth century, and Mansfield in the eighteenth century, laid down that drunkenness was no excuse; while Coke went further, and held it to be an aggravation. Since then the rulings had been somewhat contradictory. All our previous criminal proceedings had been founded on our former ignorance of any pathological state preceding intoxication. But the comparatively recent revelation of modern scientific research, that drunkenness was often the effect of disease, had not been without influence on the administration of justice. There had been a number of acquittals in charges of murder during an attack of delirium tremens, and there was a growing disposition in both judge and jury to accept a delusion of this disease as a valid plea for irresponsibility. A general ruling to this effect would be a desideratum. Many drinkers could not limit their potations. Some were born with a predisposition to intoxication, others with a defective inhibitory power. Such should not be judged by the same standard as those thoroughly sound in body and brain. When drunkenness was but a symptom of insanity, or when permanent insanity was caused by drink, all admitted irresponsibility. But when there was short-lived insanity from alcohol, why should there be responsibility any more than in temporary insanity from any other cause? Dr. Kerr suggested a mixed commission of medical and legal experts, and held that in criminal cases complicated with inebriety there should be an investigation of the health history and heredity of the accused.

ASSOCIATION OF CERTIFYING SURGEONS.

AT the adjourned meeting of certifying surgeons, held on the 25th ult., at Manchester, the formation of an Association of Certifying Surgeons under the Factory Acts, for the purposes of watching their interests and those of the children and young persons whose health it is their duty to guard, was confirmed. The following officers were elected: President, Francis H. Walmsley; vice-presidents, J. T. Arlidge, M.D., C. Johnson, and G. M. Stansfield; hon. treasurer, J. C. Eames, M.D.; hon. secretary, J. Holmes, M.D. The subscription for the first year was fixed at 10*s.* 6*d.* It is thought that after the first year 5*s.* or less will be sufficient. As those who convened the meeting had no list of certifying surgeons, many no doubt received no notice to be present. Any who were omitted are invited to join the Association and to send the names of any certifying surgeon whom they know to the hon. secretary.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

King's Norton Rural District.—Mr. Francis Hollinshead has an excellent account to give of this district in so far as disease and death have been concerned during the past year. Including deaths in public institutions, the general death-rate was 14·4 per 1000; excluding these, it was only 10·2. And as regards the so-called zymotic diseases, the corresponding death-rate was only 0·5 per 1000. No death occurred amongst the population from either scarlet fever, enteric fever, or diarrhœa. Including outside cases, there were 52 cases of scarlet fever under treatment in the isolation hospital; and it is worthy of note that one death which took place in these formed only the second fatal attack out of 209 cases admitted since the hospital was opened. We trust this year's immunity from fatal enteric fever and diarrhœa may be maintained; but if this is to be ensured, Mr. Hollinshead's advice must be followed in several respects, the most important being, perhaps, that relating to the system of excrement and refuse disposal. Privies and ashpits remain in the district, which are aptly referred to as abominable contrivances, and factors of nuisance and disease; and the filthy nuisance which they involve is made still worse by the reprehensible practice followed during scavenging—viz., that of first depositing the offensive stuff in the roads, and then carting it away afterwards. The model bye-laws issued by the Local Government Board on this subject very properly prohibit this quite unnecessary practice under penalty of a fine.

Newton-Abbott, Wolborough, and Dawlish.—These sanitary districts are within the combined area for which Mr. W. Harvey acts as health officer. In the Newton-Abbott rural district the death-rate for 1888 was 13·3 per 1000, a rate which is the more satisfactory in view of the rapid growth of Cockington. The main blot on this district seems to be Kingsteignton, which is referred to as having, as usual, shown its ability to generate dangerous zymotic disease, enteric fever being especially referred to. At Chudleigh-

Knighton, too, scarlatina is alleged to have owed its fatal type in one case to the groups of sties, privies, and manure heaps, which so abound that ventilation of rooms by open windows becomes synonymous with letting in the outside stench. On a former occasion we noted some experiments by Mr. Harvey as to the value of perchloride of mercury as a disinfectant. He has again tested it in the face of infectious disease, especially by dealing with drains and sewers, which might otherwise have favoured the recrudescence of the enteric fever poison, and he holds that the immunity from the disease has been greater than under any previous circumstances in the same localities; and, testing its effect on vegetation, in connexion with the utilisation of town sewage at outfalls, he finds that solutions of it far in excess of anything that is needed for disinfecting purposes do not, when applied to such things as geranium cuttings and grass blades, produce any harm whatever. In Wolborough the death-rate from all causes stood at 13·4 per 1000, and the district is in the position of having passed an uneventful sanitary year. At Dawlish the death-rate reached 19·5 per 1000, but excluding deaths from visitors it was 15·8. Not a single case of enteric fever is known to have occurred in the district, and this fact is recorded in connexion with that of the use of the perchloride disinfectant for the sewers and drains, and this especially in localities where the occurrence of the disease might have been anticipated.

Poole Urban and Port Districts.—The town of Poole had last year a death-rate of 17·5 per 1000 living, and its most notable preventable disease was enteric fever. Mr. H. A. Lawton very properly implies that this cause of death and disease is courted by a place that maintains a middenstead and cesspool system of excrement disposal, and that has its catchpits and polluted shallow wells. The cases of enteric fever which, under such circumstances, followed on a wet summer and a warm autumn were numerous, and they are likely to continue year by year until Poole gets rid of the conditions favouring this disease. The question of sewerage and sewage disposal are still under consideration, and Mr. Lawton advises that the disposal should be into the sea. In some cases the town water, which is stated to be constant and good, replaced the contaminated supply from local wells The vessels entering the port are now in a fairly clean state, and no particular disease seems to have needed the intervention of the authority. Mr. Lawton adds that no vessel was placed in quarantine. Since neither he nor his authority have any power to put a vessel in quarantine, it seems a pity to use a definite statutory term such as quarantine, which has application to measures differing materially from those which are at all likely to be exercised by the port authority of Poole.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5842 births and 3850 deaths were registered during the week ending March 9th. The annual rate of mortality in these towns, which had been 19·0, 19·9, and 19·7 per 1000 in the preceding three weeks, rose last week to 21·0. During the first ten weeks of the current quarter the death-rate in these towns averaged 21·0 per 1000, and was 2·8 below the mean rate in the corresponding periods of the ten years 1879-88. The lowest rates in these towns last week were 14·3 in Derby, 15·7 in Huddersfield, 16·3 in Brighton, and 17·2 in Birmingham. The rates in the other towns ranged upwards to 28·5 in Preston, 29·6 in Manchester, 30·5 in Newcastle-upon-Tyne, and 31·0 in Blackburn. The deaths referred to the principal zymotic diseases in these towns, which had been 392 and 432 in the preceding two weeks, were again 432 last week; they included 198 from measles, 94 from whooping-cough, 51 from scarlet fever, 35 from diarrhœa, 30 from diphtheria, 24 from "fever" (principally enteric), and not one from small-pox. No death from any of these principal zymotic diseases was recorded during the week in Portsmouth or in Halifax, while they caused the highest rates in Preston, Blackburn, and Salford. The greatest mortality from measles was recorded in Bristol, Liverpool, Salford, Bolton, Manchester, Birkenhead, and Blackburn; from whooping-cough in Oldham, Nottingham, Sheffield, Blackburn, and Preston; and from scarlet fever in Sheffield and Salford. The mortality from "fever" showed no noticeable excess in any of these large towns. The 30 deaths from diphtheria in the twenty-eight towns included 20 in London, 3 in Manchester, and 2 in Sheffield. No death from small-pox was registered in any of the twenty-eight great towns; and only 3 small-pox patients were under treatment at the end of the week in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital. The number of scarlet-fever patients on Saturday last in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 604, against numbers declining in the preceding sixteen weeks from 980 to 636; 64 cases were admitted to those hospitals during the week, against 53 and 41 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 326 in each of the preceding two weeks, rose last week to 402, but were 132 below the corrected average. The causes of 86, or 2·2 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Brighton, Bolton, and in five other smaller towns. The largest proportions of uncertified deaths were registered in Hull, Huddersfield, Sheffield, and Bristol.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·2 and 22·3 per 1000 in the preceding two weeks, further rose to 23·5 in the week ending March 9th; this rate exceeded by 2·5 the mean rate during the week in the twenty-eight large English towns. The rates in these Scotch towns last week ranged from 16·7 in Aberdeen and 18·3 in Paisley to 28·0 in Glasgow and 28·5 in Perth. The 600 deaths in the eight towns showed a further increase of 29 upon the numbers returned in the preceding two weeks, and included 27 which were referred to whooping-cough, 26 to measles, 11 to diphtheria, 9 to diarrhœa, 2 to "fever" (probably enteric), 1 to scarlet fever, and not one to small-pox; in all, 76 deaths resulted from these principal zymotic diseases, against 80 and 86 in the preceding two weeks. These 76 deaths were equal to an annual rate of 3·0 per 1000, which exceeded by 0·6 the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 31 and 24 in the previous two weeks, rose again last week to 27, of which 20 occurred in Glasgow, 3 in Edinburgh, and 2 in Dundee. The 26 deaths from measles, on the other hand, including 25 in Glasgow, were fewer by 15 than the number in the previous week. The deaths from diphtheria, which had been 14 and 10 in the preceding two weeks, were 11 last week, of which 6 occurred in Glasgow and 3 in Edinburgh. The 9 deaths attributed to diarrhœa included 4 in Aberdeen and 3 in Glasgow. The fatal cases of "fever" and of scarlet fever were considerably below the average. The deaths referred to the principal diseases of the respiratory organs, which had been 112 and 128 in the previous two weeks, were again 128 last week, and were fewer by 31 than the number in the corresponding week of last year. The causes of 72, or 12 per cent., of the deaths registered during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 29·4, 31·0, and 25·4 per 1000 in the preceding three weeks, rose to 33·4 in the week ending March 9th. During the first ten weeks of the current quarter the death-rate in the city averaged 29·2 per 1000, the mean rate during the same period being 19·7 in London and 19·6 in Edinburgh. The 226 deaths in Dublin showed an increase of 54 upon the number in the previous week; they included 10 from "fever" (typhus, enteric, or ill-defined), 3 from measles, 1 from scarlet fever, 1 from whooping-cough, and not one from small-pox, diphtheria, or diarrhœa. Thus the deaths referred to the principal zymotic diseases, which had been 14 in each of the previous two weeks, rose last week to 15; they were equal to an annual rate of 2·2 per 1000, the rates from the same diseases being 2·0 in London and 1·4 in Edinburgh. The deaths referred to "fever," which had been 3, 4, and 8 in the preceding three weeks, further rose last week to 10; while the fatal cases of whooping-cough declined from 5, 3, and 4 in the previous three weeks to 1. Five deaths from violence and 6 inquest cases were registered; and 75, or a third, of the deaths occurred in public institutions. The causes of 22, or nearly 10 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

ROYAL COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—Anyone who has carefully read reports of, or had the misfortune to be present at, recent meetings at the College of Surgeons, cannot but be glad that Sir Spencer Wells has at last had the courage to take a decided step.

If the Members and the unruly Fellows have a legal right to behave as they assert, by all means let them assemble and brawl to their heart's content. In the opinion of most moderate people such a course carries its own condemnation. These meetings in many cases serve only to bring into prominence a set of nonentities, Members who are either too lazy or too stupid to obtain a diploma of Fellowship, which is open to all, or Fellows who are disappointed by the lack of appreciation by the electors. I am convinced that the Council of the College has a large number of adherents, both Members and Fellows, who are opposed to such conduct, and who would in every way assist in maintaining decency and proper authority. While one party writes and canvasses in all quarters, the other makes no effort to be in touch with its following. At the present time, when the cause of right is so often overcome by the clamour of the crowd, such neglect is almost criminal. There is now ample scope for truly scientific and ethical work in England, and it is disappointing that the Council, which is willing and able to do good work, should be hindered by such petty squabbles.

I am, Sirs, yours truly,

WM. HORROCKS, M.B., F.R.C.S.

Bradford Infirmary, March 11th, 1889.

To the Editors of THE LANCET.

SIRS,—At a meeting of the Ramsgate Medical Society, held on Friday evening last, Robt. Hicks, Esq., in the chair, the following resolution was proposed by C. H. Tamplin, Esq., and seconded by F. Tyrrell, Esq., and being put to the vote was carried unanimously—viz., "That this meeting sympathises with the action taken by the Association of Members of the Royal College of Surgeons against the President and Council of the College, and pledges itself to support the course that is being taken in vindicating the rights of the Members to have a voice in the government of their own College, and in the maintenance of their ancient rights and privileges.

I am, Sirs, your obedient servant,

Ramsgate, March 11th, 1889. CHARLES COTTON, Hon. Sec.

"ANTERIOR METATARSALGIA": ITS NATURE AND TREATMENT.

To the Editors of THE LANCET.

SIRS,—I think there can be no doubt of the reality of the affection described under the name of "Anterior Metatarsalgia" by Dr. Auguste Pollosson, of Lyons, and referred to by you in your issue of March 2nd, and that many cases of obscure pain in the feet, supposed to be rheumatic or gouty, are in reality examples of this condition. The following case well illustrates the main features of the affection.

A medical man, aged thirty-three, complained to me that for the eighteen months he had suffered from attacks of burning pain in the fore part of the sole of the left foot. The pain occurred several times a week, and was usually brought on by prolonged standing or by walking any considerable distance, and was sometimes so severe as to cause him to remove his boot and grasp the sole of his foot in his hand. On examining his foot, I found that the transverse arch formed by the heads of the metatarsal bones had sunk, so that a distinct convexity replaced the concavity normally found in this situation. I advised him to practise the gymnastic exercises so beneficial in ordinary flat-foot—viz., to take every opportunity of raising the body on tip-toe, and so strengthening the tendons and muscles of the sole of the foot. Since resorting to this treatment (now nearly a month) he has been quite free from pain.

I think that this condition is clearly due to sinking of the anterior transverse arch of the foot, and pressure of the heads of the middle two or three metatarsal bones on the nerves and fibrous structures of the sole of the foot. In this case the patient had increased considerably in weight during the period of the development of the symptoms, and his transverse metatarsal ligament had presumably been unequal to the increased strain. The method of treatment mentioned above has proved very successful in this case, and deserves further trial. It has the advantage over the rubber pads recommended by Dr. Pollosson that it brings no pressure to bear on the tender parts, such as the pads must do if they are of any service at all.

I am, Sirs, yours faithfully,

Welbeck-street, W., March 4th. EDMUND ROUGHTON.

To the Editors of THE LANCET.

SIRS,—The sight of your annotation on "Anterior Metatarsalgia" pleased me, but not on account of the title, which appears to me to imply that if you are not careful you might have a "metatarsalgia" in your back, just as schoolboys are sometimes accused of having "toothache in the big toe." If we accept the pathology given, which seems to be a reasonable one, we might call it neuralgia (from pressure) at the head of the metatarsus, or, concisely, acrometatarsalgia (ἄκρος, extremity). However, the annotation seems fully to explain a case which I have had under treatment for some time, and the list of symptoms exactly corresponds. Most noticeable is the relief given by pinching the foot laterally and pushing up the joint as described. The patient was unable to account for the affection, but thought the foot might have been trodden on. It was thought to be chronic inflammation of the metatarsophalangeal joint, and counter-irritation with strong iodine was first tried. No improvement resulting, the foot was firmly strapped with plaster, which gave some relief, and the pain gradually abated so that she could walk about with more comfort. At this time she received a kick from her husband, who is a somnambulist, which bent the toes of the other foot forcibly backwards, and the same symptoms appeared in that foot. She now recalls the fact that she had a similar blow on the foot first affected. Her daughter has suffered from falling of the tarsal arches, which has been diagnosed as due to spinal curvature. My own opinion is that this is local, and that any curvature is secondary. In her case there was no pain in the front of the foot, but constant pain in the heels. In conclusion, as a country surgeon, I wish to acknowledge the valuable hints I so often receive from THE LANCET on cases which puzzle me.

I am, Sirs, yours truly,

March, 1889. J. B. E.

CONSTIPATION.

To the Editors of THE LANCET.

SIRS,—In reply to the first query of "R. P." in your last issue, I answer—Yes; but *medical* supervision is advisable. In reply to the second query—Yes. In reply to the third query—No; the worst possible thing, doing more harm than corsets.

Since the insertion of my recommendation I have been much gratified by the attention it has attracted, especially from those whose umbilical girth begins to exceed, or already exceeds, their thoracic. The drawback is that patients do not like small continuous attention to cure *themselves;* they want the doctors to do that for them; ignoring the fact that it is not the doctor's function *to cure*, but to teach patients how to get well.

I am, Sirs, yours faithfully,

Framlingham, March 11th, 1889. GEO. E. JEAFFRESON.

P.S.—Is syphilis curable? As much so as cow-pox or small-pox.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

"The Mystery of a Hansom Cab" in Real Life.

THE sensational novel with the above title, which had so remarkable a popularity last year, appears to have borne fruit in this city. The daily papers have already given the details of a murder in a cab, in which chloral seems to have been the agent used. Whoever committed the crime appears to have inveigled his victim (a gentleman of intem-

perate habits) into a hotel, and either there or in a cab immediately after leaving the house administered a sufficient dose of chloral to prove fatal within half an hour. The medical evidence showed that there was cirrhosis of the liver, but nothing to account for sudden death. The analysis of the contents of the stomach &c. gave the usual reactions for chloral, but this was not discovered in any large quantity. One or two questions of medico-legal interest may be expected at the trial of a prisoner charged with the crime, one being the rapidity with which the drug appeared to act. Also whether a person known to be addicted to alcoholic intemperance is more susceptible to the action of chloral than others, and whether one who is actually under the influence of alcohol at the time of taking the drug is not more rapidly and deeply narcotised by it.

The Eye Hospital.

By the death of Alderman Goldschmidt many of our local charities lose a good friend. For many years he took an active part in the management of the Royal Infirmary, and had for a long period been its treasurer. The Eye Hospital especially will miss him. To him is owing in no mean degree the existence of the present magnificent building in Oxford-road. To this charity he gave what is of more value than money, constant attention and direction of its affairs. A foreigner, he came a stranger to Manchester nearly half a century ago, was most successful in business, and took a leading part in public life, and has twice held the office of mayor. The large attendance at his funeral yesterday marked the respect and esteem in which he was held. By the resignation of Dr. Mules the Eye Hospital loses another of its active workers. Dr. Mules has been on the staff here for nearly sixteen years, and much regret is felt that ill health necessitates his retirement.

Chorlton Guardians and the Local Government Board.

At the weekly meeting of the Chorlton Guardians on Friday last a letter was read from the Local Government Board which seems to have given some offence to many of the members. It referred to vaccination, the board pointing out that of twenty-seven certificates of insusceptibility given by medical men not one was from a public vaccinator, and suggested that the operation as performed by public vaccinators was more efficient than that by private medical practitioners. It would almost seem that the very success of vaccination will ultimately prove its downfall. The public at large have now for so many years seen practically so little of small-pox in its unmodified form that they are beginning to think it is not such a terrible disease after all, and that the inconvenience of vaccination more than balances the gain therefrom.

Coroner's Court.

A subject in which many medical men of the district will feel an interest occupied the attention of the City Council at its last sitting. The abominable condition of our coroner's court whenever a case of public interest occurs has often been pointed out. An ordinary room in what was a moderate-sized private dwelling has to suffice for coroner, jury, witnesses, and public, and when, as in the cold weather, the windows cannot be much opened, the condition of the atmosphere when packed with people is more readily imagined than described. It is possible that the corporation may at last take some steps to provide a proper court where one may attend without the risk of being poisoned by pulmonary and cutaneous exhalations.

Salford Fever Hospital.

Once again the proposed new fever hospital for Salford is to the front, and again it meets with opposition. The Council at its recent meeting resolved to petition the Local Government Board for power to borrow money for the purchase of a site on the Eccles New-road at a cost of £1000 per acre. More than one member of the Council intimated the intention of opposing the whole scheme when the inspector came down to make the necessary inquiries. It does, in some respects, seem a pity that, in view of the probable ultimate amalgamation of the two municipalities, arrangements cannot be made for the reception of the whole of the infectious diseases of the district at the Monsall Fever Hospital, where ample space and buildings exist.

Hospital Collections.

Notwithstanding the unfavourable weather on Hospital Sunday the total amounts received this year from both Hospital Sunday and Saturday do not show much falling off. Up to the time of writing a sum of £7462 has come in, which is rather more than that received at the same date last year, and there will be a few sums yet to be added.

Complimentary Banquet to Sir William Roberts.

The Manchester medical world is about to suffer a loss by the removal of one of its oldest and most respected members. It has been known for some time past that Sir William Roberts has contemplated leaving Manchester for the metropolis; he leaves us now very shortly, and to-morrow night a complimentary dinner is to be given to him at the Queen's Hotel by his colleagues and the profession generally.

Manchester, March 12th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Work.

THE present time of the year appears to be the usual period for holding the annual meetings of the various hospitals of the town: it is probably opportune as allowing time for the books and accounts of the previous year to be made up, and for a suitable reaction after the Christmas drain on the pockets of the benevolent public.

The General Hospital.

The annual meeting of this institution, the largest of its kind in the Midlands, will be held on the 20th inst. The principal theme of discussion will be the possibility of carrying out the conditions under which a large sum of money was recently left to the hospital by the late Miss Ryland. This charitable lady, among a number of bequests of various kinds, bequeathed the amount of £25,000 to the General Hospital, provided that a new hospital was commenced before the expiration of five years. The committee are quite willing to do this, and recognise the importance of a new building to meet the growing wants of a vast community, but the difficulty is great in obtaining a suitable site sufficiently near the centre of the town. Negotiations are, however, pending which seem to afford the prospect of a solution of the problem.

The Queen's Hospital.

The annual meeting was held on the 4th inst., under the presidency of Lord Leigh. It was stated by the chairman of the committee that this was the second year in which they had managed to keep the expenditure within the income, a somewhat noteworthy fact in hospital administration. The run on the out-patient department had been great, and was an ever-increasing difficulty in the management; only 7½ per cent. of those who applied for admission were able to come in. It was shown that the sum of £900 was obtained from registration fees, and that as much as one-third of the total contributions were drawn from the working classes.

The Hospital for Women.

On the 11th inst. the annual meeting was held. The Mayor occupied the chair. The report showed a steady increase in the work done; 140 extra out-patients and 19 in-patients more than the previous year. There had been 148 abdominal sections, with a mortality of 2·7 per cent. only. The ordinary income was £1837 and the expenditure £1971.

Birmingham, March 12th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle and Gateshead.

THE death-rate of Newcastle having reached 26·2 per 1000 last week, many explanations have been given as to its rise. The variable state of the weather appears at first sight to be the most plausible; that it is not so—altogether, at all events—appears certain from the remarks on the subject in our local papers by the medical officer of health of Gateshead, who shows that, although the same climatic influences were at work there, the mortality was only about one-half, or 13·3 per 1000. That there should be such a difference in the rate of mortality in two large towns, only divided by the Tyne at about its narrowest part, is very remarkable.

West Hartlepool.

The medical officer of health, in his report to the Town Council of West Hartlepool as to the high death-rate, attributed the rise to measles being epidemic, and causing in the month of February no fewer than thirty deaths directly or indirectly. He said, also, that two samples of well water examined were unfit for human use.

Middlesbrough.

At a late inquest held on the body of a child whose death was caused by what is called "accidental burns," it was stated that no less than six deaths of this nature had taken place in the Middlesbrough district within the last few weeks, the children in all cases being left alone and having access to unprotected fires.—The Middlesbrough board of guardians have passed a vote of condolence to the widow and family of the late Mr. Keith of Normanby. He was a most able and courteous officer, and held the appointment of medical officer and public vaccinator of the Normanby district for several years.—The ambulance work at Middlesbrough still progresses, and may be said to have received a great impetus from the visit of the Prince of Wales. Surgeon-Major Hutton has been examining some classes, with satisfactory results. One class consisted of the wives of working men who had received instruction in first aid as well as in nursing.

Darlington.

Dr. Lawrence, the medical officer of health for Darlington, in his annual report, states that the most fatal epidemic disease has been whooping-cough. He says that although there have been 107 cases of scarlatina, its mild character was shown by the fact that only five deaths are attributed to the disease.—Mr. Manson, of Darlington, has been extending the use of ambulance work by giving instruction as to first aid in cases of poisoning. Considering the value of time in the administration of antidotes, Mr. Manson's lectures are likely to prove of great value.

Newcastle-on-Tyne, March 13th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

The late Dr. Murray Gibson of Portobello.

THE funeral of Dr. Murray Gibson, which took place last Thursday, gave evidence of the general respect gained by Dr. Gibson during his residence in Portobello. Most of the shops were closed during part of the afternoon, and the procession was joined by a large body of the public and friends of the deceased and by numerous members of the lodges to which Dr. Gibson acted as medical officer. Over thirty wreaths, amongst which was one from the Canadian students of Edinburgh University, were placed on the pall. Although Dr. Gibson has practised for only five years in Portobello, he was greatly esteemed by all with whom he came in contact, and especially by his patients. He came over from Canada a stranger, but in the short time he was with Dr. Young he so won the respect of his patients that when Dr. Young moved to Edinburgh Dr. Gibson took over the practice. Though his influence for good was quiet and unobtrusive, it was none the less marked, and many, others than patients, will henceforth miss the quiet encouragement and kindly advice of one true friend.

The Edinburgh School of Medicine for Women.

The lady medical students who have brought an action against the Executive of the School of Medicine for Women have made another point, in so far as the judges of the First Division of the Court of Session have decreed that proof in the case must now proceed, on the assumption that the action is relevant. The Lord President, in giving the opinion of the Court, stated that when Dr. Jex Blake and her coadjutors were endeavouring to establish a school which should afford a complete medical curriculum of four years, one of the most important considerations which the organisers must have had in their minds was the prospect of securing the requisite number of students, and therefore it was no exaggeration, he thought, to say that the students who came forward in the autumn of 1886 to enrol themselves in the then very imperfect institution might be said to be coadjutors of the defenders, and his lordship could not see the possibility of denying the pursuers the opportunity of proving their averments. Dealing with the fees charged for the pursuers, he came to the conclusion that it was the first instalment for the entire four years' curriculum.

The Edinburgh University Union.

At the meeting of the Acting Committee of the Union held last Friday it was definitely decided not to open the Union until October, as there still remains to be raised a sum of £2316, a sum that could not possibly be obtained before summer without having recourse to borrowing. It had been suggested that if, in the course of the first two years, 200 life members at five guineas each, or 100 at ten guineas, and 2600 student members at half a guinea could be enrolled, it would be safe to borrow the money and pay back out of entrance fees. This plan is, however, not considered to be practicable, and the result is that the completed building will stand empty and unfurnished for another six months. It is reported that the deadlock is partly due to some slight personal differences between a section of the Students' Representative Council and some of the officials of the Acting Committee of the Union.

Edinburgh Royal Maternity Hospital.

At the annual meeting of the subscribers of the Edinburgh Royal Maternity and Simpson Memorial Hospital, it was reported that the number of patients last year was 302, with only one death, as compared with 280 in the previous year. The number of out-door patients was 670. During the year forty-four nurses have been trained in the hospital. The income for the year amounted to £665 3*s.* 10*d.*, as against £656 3*s.* 3*d.* in the previous year, and the expenditure was £753 10*s.* 3*d.*, showing a deficiency of income of £88 15*s.* 5*d.* The directors asked for a further income of at least £100 to carry on the hospital efficiently, even on its present inadequate basis. The Ladies' Committee reported favourably on the management of the hospital.

The Stockbridge Child Murders.

The fate of Jessie King, or Kean, eventually depended upon the report of a special commission as to her mental condition. It appears that some years ago the woman's mind was seriously affected whilst she was under treatment by Dr. Andrew Smart. This fact was made known at the proper quarter, and a medical examination was made by Sir Arthur Mitchell and Sir Douglas Maclagan, who, however, reported that there was no evidence of mental disturbance to be found sufficient to justify a reprieve. There appears to be little doubt that, in the present state of the law, Jessie King suffered justly the extreme penalty, but one must have great sympathy with those who have made such strenuous and unremitting, though unsuccessful, efforts to obtain a commutation of the sentence of death. Capital punishment is at best but a survival from barbarous ages, but, so long as it is deemed necessary to make use of it to uphold the majesty of the law, such criminals as this wretched woman are those to whom it must be meted out.

Edinburgh, March 12th.

GLASGOW.

The Sanitary Requirements of a Dairy Farm.

THE medical officer of health of Glasgow (Dr. J. B. Russell) has, at the request of the local authority of Glasgow, drawn up and issued a short but pithy pamphlet on the above subject, for the information of persons engaged in the milk-supply of the district. In the first section, under the heading "The Farm-steading as regards the Health of the Inmates," he shows how closely the health of the farmer and his family, and the health of his distant customers, are bound up together, and he gives some simple and easily understood hints on house ventilation and drainage. He then discusses the arrangement and planning of a farm-house in regard specially to the business of milk production and the health of the cows; disease in man and in the cow in relation to milk; and cleanliness in general in relation to milk. Under the latter heading he points out how unfortunate it is that in Scotland a barrel is the sort of vessel most commonly in use for the conveyance of milk. Wood is porous, and difficult to clean under any circumstances, but the structure of the barrel, the inside of which cannot be reached and cannot even be seen, is the worst that could be devised. Only live steam has any chance of making it sweet. Some form of tin vessel, to all the internal surface of which

the hand can reach, and which is open to inspection, such as is in common use in England, would be much more preferable. Dr. Russell summarises his hints as follows: "1. A farm-house ought to be wholesome in structure, and the steading well supplied with pure water, drained by vitrified pipes, and with privy accommodation for both sexes. 2. The house ought to stand apart from the premises used for dairy purposes. A distinct domestic washing-house is indispensable. The milk-house ought to open into the free air, and be at a distance from the dung-pit. The dung-pit ought to have retaining walls, an impervious bottom, and a light roof borne on pillars. 3. The byre ought to be well lighted, ventilated, and paved, and regularly cleaned. 4. No person who suffers from infectious or any recent indefinite illness, or who has been in any way in communication with an infected person or thing, should engage in the milk business. 5. The milk of no animal which seems to be ill, or which has any sore about udder or teats, ought to be sold for human consumption. 6. The udders and teats, if soiled, ought to be washed before milking. Soap, warm water, and towels ought to be at hand, and every milker ought to wash his hands before beginning. 7. Healthy cattle, healthy servants, cleanliness in every detail of the business of the dairy farm, mean money to the producer and retailer of the milk."

House Ventilation.

Mr. D. G. Hoey read a paper a fortnight ago at the Philosophical Society, in which he claimed to have solved the problem of house ventilation. Describing the practical method adopted to carry out the principles, Mr. Hoey said that for the admission of fresh air without currents or draughts a dado from about three feet to four feet in height was fitted at conveniently available parts round the room, with a narrow space between the dado and the wall, and on the top of the dado wire gauze or perforated metal was fixed in an inclined position so that articles might not be placed upon it to impede its action. The fresh air was introduced into the dado space at a low level through a number of inlets from the outer atmosphere along the whole line; the total area of these inlets was proportioned to the area of the hot-air shaft for carrying off the impure air. The area of the exit from the top of the dado into the room being much greater than that of the whole inlets, and the total space enclosed by the dado forming a fresh-air chamber or reservoir being much greater still, the outer air, coming into this extended space, lost its initial velocity, spread itself slowly over the interior of the reservoir, gently percolated through the innumerable interstices in the wire gauze or perforated metal on the top, and, by reason of its specific gravity being somewhat greater than that of the air it met there, insensibly permeated the atmosphere of the room by imperceptible diffusion at the low level, at which it immediately yielded an abundant supply of oxygen. In summer the air admitted might be cooled, and in winter it might be warmed. The impure air might be carried off by a flue or tube opening into the chimney, or by a sunlight in the roof. Mr. Hoey states that his system has been tried with success in one of the buildings in the Glasgow Exhibition (the Bungalow Bar, in which the temperature was maintained at 60° on a hot summer day, while the other buildings were at 80°, and one kitchen at 110°), in the Glasgow Liberal Club, and in the Glasgow Stock Exchange.

Samaritan Hospital.

The number of patients treated in this hospital in 1888 was 430, 67 of these being in-patients. The average period of residence was thirteen days, but many patients had remained for periods of from three to five weeks. In all, 139 operations had been performed, and no deaths had occurred, all the patients making excellent recoveries. The institution had paid its way in 1888, and ended the year with a small balance to the good.

Ophthalmic Institution.

During the past year 3735 new cases were treated in this institution, of which number 481 were in-patients. 3460 patients were cured, 152 improved, and 123 dismissed as incapable of further benefit. The financial statement is satisfactory, there being a balance from last year of £343. Nearly two-thirds of the entire income were contributed by the working classes by regular factory and workshop collections.

Glasgow, March 12th.

ABERDEEN.

The Royal Infirmary.

THE annual report of the directors of the Royal Infirmary, submitted to and approved by the annual general meeting of the corporation on Feb. 13th, is the second report under the Act of Incorporation. In it the directors say that they "have every reason to believe that the infirmary has during the year fulfilled its important mission to the sick and injured of the humbler classes in as thorough a manner as at any period of its history—a result largely due, as they thankfully acknowledge, to the skill and constant care of the medical and surgical staff, and to the unremitting and devoted attention of the honorary superintendent, Miss R. F. Lumsden." During the year, 2310 patients were treated in the wards of the hospital, and of that number 875 were medical and 1435 surgical cases. In the eye department there were 216 patients. The average number in the hospital was 166·7, and the highest number 191; the average residence in hospital was twenty-two days. Of those treated in the wards, 1102 were cured, 678 improved, and 147 died. The average death-rate in medical cases was about 1 in 8·7, and in surgical about 1 in 30·5. There were 1139 out-patients supplied with advice and medicine; of these, 207 were medical cases, 648 surgical, and 284 eye cases. In the eye department 154 operations were performed during the year. A new table is included in this report for 1888—viz., one giving a list of the operations performed by each of the three surgeons. The report says, "the directors have great pleasure in finding that the income for the twelve months has fully met the expenditure," which was £5864 3*s.* 9*d.*, a sum slightly less than that for 1887. "The directors regret that the accounts do not show any reduction in the amount expended on surgical and medical stores ..... and crave the attention of the staff to the expenditure under this head." The accounts show that the sum of £136 3*s.* 8*d.* was paid for surgical instruments and apparatus; £64 2*s.* 8*d.* for antiseptic wools and dressings; £102 7*s.* 9*d.* for "other dressings." The total medical and surgical expenditure is £940 11*s.* 8*d.* The amount subscribed for the Jubilee extension scheme is £29,419 15*s.* 4*d.*, and the addition of interest brings it up to £30,000, the sum sought for the necessary extension and improvement of the hospital. It has since, however, been found that a larger sum will be necessary to complete the original scheme. The report also states that under the supervision of the medical staff a new edition of the Infirmary Pharmacopœia was prepared during the year (edited by Dr. P. Blaikie Smith) and published in November last.

The Convalescent Hospital.

During the year 311 patients were admitted into the Convalescent Hospital, and the average duration of residence was fourteen days. The financial position of the hospital is such as to cause the directors grave anxiety, and a special committee appointed to report on the subject gave it as their opinion "that, if the public do not support the institution during 1889, the question of closing it, either temporarily or permanently, will have to be considered." During the years 1885, 1886, and 1887 the deficiency of income amounted to upwards of £500, and that of last year reached the sum of £182 6*s.* 2*d.*

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

Royal Medical Benevolent Fund Society of Ireland.

AT a quarterly meeting of the Central Committee, held recently at the Royal College of Surgeons, the acting secretary having reported that the Belfast Branch had made an energetic attempt to further the interests of the Society in that district, the following resolution was unanimously adopted:—"Resolved, that the Central Committee of the Royal Medical Benevolent Fund Society of Ireland desires to express its appreciation of the energetic efforts of Dr. Henry Purdon and the members of the Belfast Branch in organising local meetings for promoting the interests of the Society, and also to express the gratification with which they have heard of the large measure of success which has attended the efforts of the Belfast Branch." The Society has received a sum of £200, being the amount of a bequest by the late Dr. Swan of Kingstown.

Zymotic Diseases in Ireland.

The mortality returns for the December quarter are favourable, the general death-rate being below the average, and the aggregate mortality from the principal zymotic diseases showing a marked decline when contrasted with the returns of the corresponding quarter. Typhoid fever was rather prevalent and fatal in Dublin and Belfast, whooping-cough in Dublin, Cork, and Swineford Union, scarlatina in Limerick and Ennis, and measles in the Armagh urban district; but there was no extended prevalence of these or of any other zymotic disease. The total deaths from the principal zymotic diseases were 1362, a number equal to an annual rate of 1·1 per 1000 living. Measles caused 120 deaths, against 805 for the first quarter; scarlatina, 183; typhus, 82; whooping-cough, 256, or 49 less than the average for the corresponding quarter of the five years 1883–7. Diphtheria caused 117 deaths, or 26 in excess; typhoid fever, 195, or a slight increase; and diarrhœa, 335, a number somewhat below the average.

A Centenarian.

There is at present in the Newry Workhouse a woman—Mary Mc Henry—who has attained the remarkable age of 105 years. Up to a week or two since Mrs. Mc Henry was able to knit and sew, and it is thought she is the oldest person now living in Great Britain or Ireland.

The remains of the late Dr. George Johnston, who died last week after a somewhat lingering illness, were interred yesterday (Monday) in St. George's burial ground, Drumcondra.

By the ball recently held at Kingstown the funds of St. Michael's Hospital have been increased by a sum of £213.

Dublin, March 12th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Tetanus in Animals.

M. NOCARD, the well-known veterinarian, drew the attention of the Academy of Medicine to certain epidemics of tetanus in private practice affecting animals treated by certain veterinarians, whilst animals treated by other veterinarians remained unaffected. On the other hand, the inoculability of traumatic tetanus cannot be seriously contested. It is sufficient to inoculate pus from a wound to render tetanic the greater number of animals susceptible of contracting the malady (guinea-pigs, rabbits, sheep, asses, horses, &c.). The author here observes that spontaneous tetanus does not in any way differ from traumatic tetanus; it is, therefore, probable that both have an identical cause. It is more difficult to interpret the *rôle* of cold in a large number of cases of tetanus. It appears to be established that in cases of surgical tetanus it is the instruments of the surgeon which convey the contagium to the operation wound; hence the clear indication for antiseptics. Since 1882, M. Nocard had performed seventeen complete necropsies of tetanic horses. Besides notable increase of the quantity of cerebro-spinal fluid, he found nothing abnormal. He thought that the tetanic virus is seated, like the rabic virus, in the nervous centres, but he had not been able to find the tetanic contagium either in the nervous centres or in the blood. M. Trasbot, an ardent disciple of M. Verneuil, pointed to the fact that all muscular rigidity is not tetanic. Thus, the rigidity of animals overworked or suffering from fatigue—the malady of the deer, as it is called—disappears by rest. A deer, accidentally hunted and falling into the possession of the hunters, was completely immobilised by the stiffness of its limbs. The animal was not killed, and the next day the pseudo-tetanus had disappeared.

Mode of Formation of Intra-vascular Concretions.

At a recent meeting of the Academy of Sciences, Professor Hayem read a note on the mode of death in rabbits transfused with the blood of the dog. The author stated that after the injection of a small quantity of the blood (pure or defibrinated) or serum of a dog into the bloodvessels of a rabbit, the animal soon succumbs by asphyxia. At the necropsy recent clots are found distending the right cavities of the heart and extending into the pulmonary arteries. Death takes place by arrest of the circulation, as if a ligature had been placed around the trunk of the pulmonary artery. The formation of these massive thrombi in the living blood in contact with the injected blood is the consequence of the solvent action produced by the plasma of the dog on the red globules of the rabbit. This note completes the author's previous communications on the mode of the formation of intra-vascular concretions.

Cremation.

A very curious experiment of rapid cremation was performed last week at the manufactory of the Parisian Company of Compressed Air, where M. Guichard, municipal councillor, had constructed a crematory oven, of which he is the inventor. The researches of M. Guichard were directed principally to the means of shortening the time for the incineration of bodies. He employs coal gas, of which the jets are directed on the body by means of strong pipes. The results obtained were very satisfactory. In forty minutes a sheep of large size, weighing fifty kilogrammes, enveloped in a sheet, and put into a wooden case, was reduced to ashes, without the appearance of the least escape of smoke by the chimney, or any perceptible odour. This first trial of the crematory oven of M. Guichard is reported to have been most conclusive, and new researches may still more abridge a funeral ceremony which it is important to render as short as possible.

Deaths from Rabies.

At the last meeting of the Société Médicale des Hôpitaux, Dr. Gérin Roze reported a case of death from rabies in a young girl who was subjected to the Pasteurian treatment eighteen hours after the bite. The treatment was regularly followed, but did not prevent the patient from succumbing to an attack of most characteristic rabies, as described in detail in the report in question. The author of the note asks to what may be attributed this failure of the Pasteurian treatment, which was gone through in a case apparently highly favourable for such treatment.—Two more deaths are registered by the Semaine Médicale of persons from rabies, who had undergone the anti-rabic inoculations: 1. B. Druaux, of Aubervilliers, aged fifteen years, bitten Jan. 7th, 1889, by a rabid dog, and treated at the Pasteur Institute from Jan. 9th to 28th, died from rabies on Feb. 11th. 2. J. L. Dufour, of Veyras, aged seventy-two years, bitten on Dec. 23rd, 1888, and treated at the Pasteur Institute from Dec. 25th, 1888, to Jan. 12th, 1889; died from rabies on Feb. 13th.

Chair of Clinical Obstetrics.

Clinical Obstetrics and Obstetrics (Theoretical) at the Faculty of Medicine have hitherto formed two distinct chairs; by a recent decree they have now become one, and Dr. Tarnier, who was the titular professor of the latter, has been appointed to the new chair under the title of Professor of Clinical Obstetrics.

Baron Pasteur.

The Emperor of Austria has conferred on M. Pasteur the Order of the Crown of Iron, which gives him the right to the title of baron and the insignia of nobility.

Paris, March 12th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A New Laryngological Society.

A LARYNGOLOGICAL SOCIETY was founded here on Feb. 22nd. Drs. A. Rosenberg, B. Fraenkel, P. Heymann, Landgraf, and Lehoetz form the preliminary committee. After the settlement of business matters, Geheimrath Professor Gerhardt delivered a lecture on paralysis of the vocal ligaments, which was followed by a lively discussion.

The Empress Frederick's Hospital for Children.

The General Committee of the Children's Hospital, of which the Empress Frederick is patroness, met last Sunday in a room in the House of Deputies, under the presidency of Professor Virchow, who gave a report of what had been done. Thanks to the circumstance that winter had set in late, the work had advanced so far that parts of the building were already visible. The house for scarlet fever and diphtheria patients, and that containing the kitchen and the boilers, had already been begun. Of the sum of 700,000 marks (i.e., shillings) needed for the building, 200,000 had already been collected, and it was hoped that

this sum would soon be so much increased that it would be possible to begin the second house for patients and the polyclinical department. The laying of the foundation stone had been delayed owing to the absence of the Empress Frederick. There is to be a concert for the benefit of the hospital next month.

The Balneological Congress.

The eleventh Balneological Congress met here under the presidency of Professor Liebreich on Saturday and Sunday last. Not only Germany, but also England, Holland, Austria, and Norway were represented. The President stated that the report on the hygienic conditions of the various watering-places was not yet finished, but that its preparation had already had a perceptibly beneficial effect. Freiherr von Liebig of Reichenhall spoke on mountain-sickness, Loewy of Berlin on the influence of salt purgatives on the gases of the human body, Schott of Nauheim on heart diseases, von Corval of Baden-Baden on hypnotic therapeutics, Groedel of Nauheim on the influence of baths on the electric excitability of the muscles and nerves, Ewald of Berlin on chronic catarrh of the stomach and its treatment by baths, Georg Rosenbaum of Berlin on electric baths and their application for hysteria, hypochondria, and nervous debility, Gano of Karlsbad on the saccharin question, Stifler of Steben on carbonic acid chalybeate baths, and Lindemann of Heligoland on the healing virtue of the North Sea. Among other things, he mentioned that children's diseases are almost unknown in Heligoland, and that the average age attained there is fifty-four. Dr. Weber of London, was elected honorary member of the Balneological Society, in recognition of his valuable researches on balneology and climatology.

Dr. Gscheidlen.

Dr. Gscheidlen, Professor of Chemistry in the University of Breslau, died on the 4th inst. He was the author of essays on the Chemical Processes in the Formation of Secretions in the Glands of the Human Body, and on the Effects of certain Poisons on Animals. He founded the *Breslauer Aerztliche Zeitschrift* in 1879.

The Annual German Medical Congress.

The annual German Medical Congress will sit at Brunswick on June 24th and 25th. The subjects of discussion will be the fees of medical witnesses and experts, the paragraphs referring to physicians in the draft of the new civil code, the relations of physicians to accident insurance and professional associations, the regulations of the pending Bill modifying the law concerning sick societies, the general condition of the medical profession, the creation of a medical statute-book for Germany, and the defects of the existing system of medical examinations and how to remedy them. Certain leading principles for a medical statute-book, with special reference to puffing and specialists, are also to be laid before the Congress.

On the 5th inst. the Prussian Lower House granted the money necessary for the establishment of a professorship of hygiene and a hygienic institute in the Universities of Halle and Marburg.

Berlin, March 7th.

THE SERVICES.

ADMIRALTY.—The following appointments have been made:—Surgeon Richard E. Biddulph, B.A., M.B., to Malta Hospital, and Surgeon Matthew Digan to the *Téméraire* (both dated April 17th, 1889); Mr. Alfred Lea Martyn to be Surgeon and Agent at Torcross and Hallsands (dated March 8th, 1889); Surgeon Horace X. Browne to Cape of Good Hope Hospital; Surgeon James M. France to the *Raleigh*; Surgeon Henry J. Hadden to the *Pembroke* (dated March 13th, 1889).

VOLUNTEER CORPS.—*Rifle:* 1st Cinque Ports: Acting Surgeon C. R. Elgood, M.D., is appointed Captain (dated March 9th, 1889).—2nd Volunteer Battalion, the Gloucestershire Regiment: Acting Surgeon P. Buchanan, M.B., resigns his appointment (dated March 9th, 1889).—1st Volunteer Battalion, the Hampshire Regiment: Lieutenant William McIntyre is appointed Acting Surgeon (dated March 9th, 1889).—2nd Volunteer Battalion, the King's (Liverpool Regiment): Acting Surgeon W. Irvine, M.D., resigns his appointment (dated March 9th, 1889).—3rd Volunteer Battalion, the Lancashire Fusiliers: Surgeon R. Crean, M.D., resigns his commission (dated March 9th, 1889).—1st Volunteer Battalion, the Northumberland Fusiliers: William Bertie Mackay, M.B., to be Acting Surgeon (dated March 9th, 1889).—2nd Volunteer Battalion, the Worcestershire Regiment: Arthur Corrie Keep, M.D., to be Acting Surgeon (dated March 9th, 1889).—1st Volunteer Battalion, the Princess of Wales's Own (Yorkshire Regiment): Honorary Assistant Surgeon J. H. Handyside resigns his commission (dated March 9th, 1889).

VOLUNTEER STAFF CORPS.—The Woolwich Division: Richard Charles Studdert, M.D., to be Surgeon, Supernumerary (dated March 9th, 1889).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council held on Thursday, March 14th, the minutes of the Extraordinary Council on the 21st ult. were read and confirmed. The further report, dated the 13th inst., of the Committee on the Formulæ for New Bye-laws was read and considered, and the Formulæ having been approved by the Council, the same were ordained and signed by the Members present. It was agreed that, without waiting for the confirmation of the minutes, the legal advisers of the College be instructed to take the necessary steps for submitting the Formulæ without delay to the proper authority (the Secretary of State for the Home Department) for sanction and ratification.

The President reported the proceedings in connexion with the proposed illegal meeting of Fellows and Members. These we have already reported in our columns. A letter was read from Mr. Wilde, dated the 8th inst., reporting the proceedings in the Court of Chancery in reference to the motion for an injunction against the Council. A draft of a letter of the 22nd inst. from the secretary was read, and forwarded to the thirty conveners of the illegal meeting, in pursuance of the resolution of the Council at its last meeting. The secretary read twenty-three replies which he had received, the majority of which expressed ignorance on the part of the writers of the existence of Bye-law 17. After which, it was resolved unanimously that "pending the proceedings in the Court of Chancery calling in question the validity of Section 17 of the Bye-laws, the consideration of the infraction of that section by the conveners of the meeting of Fellows and Members at the College on the 28th ult., and the penalties consequent thereon, be deferred."

A letter of the 6th instant was read from Dr. Edward Liveing, stating that the Secretary of State for War had approved the nomination by the Royal College of Physicians of Dr. T. Graham Balfour as the representative of that College on the Committee of Inquiry into the Pay, Status, and Conditions of Service of Medical Officers of the Army and Navy.

A letter of the 8th inst. was read from the Secretary of State for War, thanking the Council for their nomination of Mr. N. C. Macnamara as their representative on the committee, and requesting that Mr. Macnamara may be asked to attend to any directions he may receive from Lord Camperdown as to the meeting of the committee.

The following motion by Mr. Marshall, entered on the summons by permission of the President, and seconded by Sir James Paget, Bart., was carried unanimously: "That the marble bust of Sir W. J. Erasmus Wilson, by Mr. Thomas Brock, A.R.A., be placed over the mantelpiece in the East Library, and that the ornamental marble niche, designed by Mr. Brock for its reception, be executed forthwith, at the estimated cost of £100."

REFORM OF THE ROYAL COLLEGE OF SURGEONS.

THE Parliamentary Committee appointed at the meeting of Fellows and Members held at the Venetian Room met at 42, Queen Anne's Gate, S.W., on Wednesday last. Present: Dr. Collum (in the chair), Messrs. Pollock, Tweedy, Davy, Lawson Tait, Sir William Moore, Dr. Thomas, Dr. Gooding, Deputy Surgeon-General Jessop, Dr. Steele, Mr. Wm. Ashton Ellis, Mr. Joseph Smith, and many others.

It was notified that Lord Randolph Churchill had undertaken to introduce the Bill (a *précis* of which appeared in THE LANCET, March 9th, page 500) at an early date.

It was resolved—"That, subject to the opinion and advice

of counsel, Clause 40 be so altered as to provide that the method of election, the number, duties, and tenure of office of all the examiners of the College be governed by bye-laws." It was also resolved to publish and distribute a concise statement of the origin and aims of the Association of Members, more particularly in reference to Parliamentary action; and a sub-committee was appointed to superintend the progress of the Bill, and to report from time to time their action to the Parliamentary Committee.

A Guarantee Fund has been started for the purpose of indemnifying the plaintiffs in the case of Steele and others *v.* Savory and others, and also for the purpose of meeting any expenses entailed by the promotion of a Bill in Parliament to reform the constitution of the Royal College of Surgeons of England. The following sums have already been guaranteed:—Mr. Lawson Tait, £100; Dr. G. Lanford Thomas, £50; Dr. W. C. Steele, £20; Mr. Richard Davy, £10 10*s.*; Dr. R. Collum, £10 10*s.*; Mr. W. A. Ellis, £10 10*s.*; Mr. R. Abud, £5 5*s.*; Dr. J. W. B. Mason, £5 5*s.*; Dr. C. Royston, £5 5*s.*; Mr. Joseph Smith, £5 5*s.* It is hoped that all Members of the College will contribute to this fund according to their means, and send contributions to the honorary treasurer of the fund, Deputy Surgeon-General C. M. Jessop, 98, Sutherland-avenue, W.

Obituary.

GEORGE JOHNSTON, M.D.

THIS gentleman died at his residence at Stephen's-green, Dublin, on the 7th inst., aged seventy-four years. His father, Andrew Johnston, held the post of Professor of Midwifery in the Royal College of Surgeons in Ireland, and for many years acted as treasurer of the College. The subject of this notice was educated at Edinburgh, where he obtained his degree of Doctor of Medicine in 1845; he also pursued his medical studies in Dublin and Paris. Dr. Johnston was elected a Fellow of the College of Physicians in 1863, and filled the presidential chair in 1880–81. Devoting his attention to obstetric practice, he was appointed master of the Rotunda Lying-in Hospital, and held that important post from 1868 to 1875. He was a strong advocate for the early use of the forceps, more especially where the os uteri is not fully dilated, and his results generally were satisfactory. He, however, considered that the forceps should not be used under such circumstances except by a practitioner who is thoroughly acquainted with the process of parturition, and who also possesses the necessary delicacy of touch and accuracy of manipulation. Dr. Johnston was an ex-president of the Obstetrical Society of Dublin, a Fellow of the Royal Geographical Society, and a member of the Royal Dublin Society. The deceased was the author of "Clinical Reports of the Rotunda Hospital from 1868 to 1875," and joint author with the late Sir E. B. Sinclair of "Practical Anatomy," comprising an account of 13,748 deliveries which took place in the Rotunda Hospital during his seven years' tenure of office. His contributions included a case of tumour of the cervix uteri and a case of inversion of the uterus, both these papers being published in the *Dublin Journal of Medical Science*.

DR. ISIDOR SOYKA.

THE great Hygienic Congress at Vienna in the autumn of 1887 numbered few more accomplished members than Dr. Isodor Soyka, whose labours in connexion with the exhibition organised for the occasion evoked much favourable comment. He was then in his thirty-seventh year, a German-Bohemian by birth, educated partly at the University of Prague and partly at that of Munich, where he made special studies in State medicine under Professors von Pettenkofer and Nussbaum. Having qualified at the latter school as a *privat-docent*, he devoted himself with ardour to hygienic science—the sanitation of great cities, especially their canalisation, and the etiology of diseases, contagious and epidemic, being his favoured subjects. Six years ago his high reputation at Munich led to his being called to the chair of Hygiene in the German school at Prague as Professor Extraordinary, and there he was fulfilling more than the sanguine expectations formed of him, when on the 23rd ult. his career was brought to a close by his sad death by suicide.

His family history was of the highly neuropathic description, and the ardour, almost exaggerated in its intensity, with which he threw himself into the work of his chair was felt by not a few of his colleagues to be *motivé* by the dread of mental derangement which in such constitutions is invited, if not absolutely induced, by inadequate occupation. The death of his brother, the advocate, Dr. Soyka, in a lunatic asylum in Vienna, last year, had, it was noticed, impressed him deeply, while intercurrent fits of melancholia and exaltation were affecting his conduct in sundry ways. On the afternoon of the 23rd ult. he had come home to his residence in the Herrengasse, and about an hour afterwards his neighbours were alarmed by the report of a pistol-shot proceeding from his apartment. Their worst fears were realised when, on forcing open the door, they found the professor dying from a wound in the head, with a recently discharged revolver lying by his side. His colleague, Professor Gussenbauer, arrived shortly afterwards, but only to find him breathing his last. On his desk was a scrap of paper with the following words written upon it: "Dear brother! I am following you. When reason goes, then comes the pistol-shot. It is better to die than to live a lunatic."

Dr. Soyka's death has evoked profound sympathy throughout the profession in Austria-Hungary, and indeed wherever his amiable character and devotion to science were known.

DR. O'DWYER.

ON Sunday morning last some of the medical *confrères* of Dr. O'Dwyer were profoundly moved on learning of the sudden and unexpected death of this most skilful and estimable general practitioner. For some time past his general health had been failing, but, nevertheless, his death came as a surprise and shock to all, as up to the last he continued in the active practice of his profession, having only on the previous evening arranged with Professor Macnamara for a consultation upon one of his patients on the following day. Dr. O'Dwyer belonged to a class of practitioners in Dublin which nowadays is, comparatively speaking, dying out—keeping an open shop, and practising medicine, surgery, and midwifery. He was educated in the Meath Hospital, where he was clinical clerk to the illustrious Stokes, who entertained the highest opinion of his diagnostic skill and sagacious practice. In 1849 he became a licentiate of the Apothecaries' Hall, and in 1858 a licentiate of the Royal College of Surgeons of England. Dr. O'Dwyer quickly gained the confidence of the general public, and he was also for years the family attendant of the late Dr. O'Farrell, the eminent surgeon of St. Vincent's Hospital. Conscientious, kind, skilful, and generous to a fault, in him the profession, and, in particular, the sick poor, have sustained a severe loss.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having previously passed the necessary examinations, were at an ordinary meeting of the Council on the 14th inst. admitted Fellows of the College:—

Burghard, Frédéric François, M.B. Lond., Weymouth-street, W. (Membership dated Jan. 25th, 1886.)

Brook, Wm. Henry Breffit, M.B. Lond., County Hospital, Lincoln. (Membership dated Jan. 21st, 1887.)

ROYAL COLLEGE OF SURGEONS IN IRELAND.—FELLOWSHIP EXAMINATION.—The following gentlemen have been admitted Fellows of the College:—

John Dallas Edge, Surgeon-Major Army Medical Staff, and Claudius O'Donel, Surgeon, Army Medical Staff.

MEDICAL MAGISTRATE. — Mr. David Davies, F.R.C.S. Eng., of Aberdare, has been added to the Commission of the Peace for the county of Glamorgan.

PRESENTATION.—On the 6th inst. several medical gentlemen of the city and district met Dr. Wolfe in the Alexandra Hotel, Bath-street, Glasgow, and presented him with a piece of silver plate, bearing an appropriate inscription, on the occasion of his approaching marriage. Dr. Richmond presided, and in a few well-chosen terms referred to Dr. Wolfe's eminence as an oculist and to his skill as an operator. Dr. Wolfe made a suitable reply.

TOWN AND COUNTY HOSPITAL, NAIRN.—The directors have decided to erect a separate fever ward in connexion with the institution.

INTER-HOSPITAL FOOTBALL CHALLENGE CUP.—The match to determine the possession of this cup for the coming year will be played between Middlesex and St. Thomas's Hospitals on Wednesday next, March 20th, at 3 P.M., at the Athletic Club ground, Richmond.

NEWARK HOSPITAL AND DISPENSARY.—The report for the year 1888 states that the accounts show a balance of £60 18*s.* 5*d.* in favour of the institution. The total number of patients treated during the year (exclusive of the provident branch) was 1423. The provident department is represented as making steady progress.

VOLUNTEER MEDICAL ASSOCIATION.—An officers' class will be commenced at 26, King William-street, Strand, on Thursday, May 2nd, at 4 P.M., with the object of affording the necessary instruction for obtaining the War Office Proficiency Certificate. The lectures will be given by Surgeon W. Collingridge, M.D., V.M.S.C.

PRESENTATION TO THE LATE DEAN OF ST. MARY'S. At the annual sports dinner of St. Mary's Hospital Medical School last Tuesday, Dr. Broadbent, senior physician, in a complimentary speech, presented Mr. Field, on his relinquishing the office of Dean of the Medical School, with a silver tea and coffee service, a chiming clock, and to Mrs. Field a magnificent diamond pendant.

THE JENKS PRIZE.—The first triennial prize of 250 dols. under the deed of trust of Mrs. Wm. F. Jenks has been awarded by the Prize Committee of the College of Physicians of Philadelphia to John Strahan, M.D., M.Ch., M.A.O. (Royal University, Ireland), 247, North Queen-street, Belfast, Ireland, for the best essay on "The Diagnosis and Treatment of Extra-uterine Pregnancy."

OPEN SPACES.—The Leeds Town Council has resolved to purchase for £12,000 the site known as the Cross Flats Estate as a recreation ground for the Holbeck, West Hunslet, and Beeston districts.—Sir S. M. Maryon Wilson, Bart., of Charlton House, has presented to the town of Woolwich about six acres of land as a recreation ground, and will defray the expense of adapting it for that purpose.

DELANCEY FEVER HOSPITAL, CHELTENHAM.—The report for 1888 describes that year as the most uneventful in the history of the hospital since its foundation in 1874. Eleven cases only of infectious disease have been admitted; one case of diphtheria, one of typhoid, and only eight of scarlet fever. In the latter cases, prompt and complete isolation has probably in more than one instance prevented an epidemic.

A SANITARY ASSOCIATION FOR STOCKPORT.—At a public meeting, held on Tuesday last in the Stockport Court-house, it was resolved to organise a Sanitary Association, to act in co-operation with the Sanitary Committee of the corporation. In compliance with the draft scheme submitted, the votes of the medical practitioners in the borough had been taken on the appointment of the first president of the Association, which resulted in the unanimous election of Dr. Rayner, the medical officer of health.

SWEATING IN ST. LUKE'S.—At a meeting of the vestry on the 6th inst., a motion to the following effect was proposed: "That with a view of preventing sweating in future, persons tendering for the supply of goods or materials for the use of the vestry, be required to show that they are in the habit of paying fair trade wages as other houses in similar trades." It was seconded, and considerable discussion ensued; but on its being put to the vote it was negatived by 18 votes to 6.

BEQUESTS AND DONATIONS TO HOSPITALS.—By the will of Mr. David Hulett, late of 55, High Holborn, and Hill, Belvedere, Kent, £250 is bequeathed to the Royal Hospital for Diseases of the Chest (City-road), £200 each to the Royal Free Hospital (Gray's-inn-road), the Middlesex Hospital, the Charing-cross Hospital, the Westminster Ophthalmic Hospital, and the Great Northern Hospital.—The proceeds of the supplement sale in connexion with the floral fête given by the pupils of the Aberdeen Music School, in aid of the Sick Children's Hospital, amounted to £81 10*s.*

YELLOW FEVER AT SANTOS.—A Reuter's telegram from Havre reports that a rumour is in circulation there of an outbreak of yellow fever at Santos, in Brazil, and of a consequent panic and emigration.

COTTAGE HOSPITAL FOR RIPLEY.—Mr. J. Crossley (a large employer of workmen in that town) has offered to pay £20 per annum for four or five years as rent for a suitable building as a cottage hospital for Ripley.

ROYAL METEOROLOGICAL SOCIETY.—At the ordinary meeting of the Society, to be held at the Institution of Civil Engineers, 25, Great George-street, Westminster, on the 20th inst., at 7 P.M., Dr. W. Marcet, F.R.S. (President), will deliver an address on "The Sun: its Heat and Light," which will be illustrated by experiments. After the reading of this address the meeting will be adjourned, in order to afford the Fellows and their friends an opportunity of inspecting the exhibition of actinometers and solar radiation apparatus, and of such new instruments as have been invented and first constructed since the last exhibition.

ROYAL OPHTHALMIC HOSPITAL, WESTMINSTER.—The annual meeting of this hospital was held on the 7th inst., and for the first time at the Mansion House, the Lord Mayor presiding. The report stated that during the year 7571 new out-patients had received the assistance afforded by the hospital, and 324 in-patients had been admitted. From the foundation of the institution in 1816 to January 1st last 371,136 persons had availed themselves of its advantages; of that total 22,083 had been in-patients. The income from all sources for the year under review amounted to £2865, and the expenditure was £1797.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—The report of the committee for the past year is on the whole satisfactory. The number of in-patients had been 2196, of which 1784 were cases for operation. 25,261 out-patients were treated for various diseases, and the attendances numbered 126,305. The annual subscriptions showed an increase of £52, and the total amount received was £798. Donations and legacies amounted to £3111, and the voluntary gifts of the patients to £264. An enlargement of the hospital is contemplated, which would involve an outlay of between £25,000 and £35,000.

LONDON THEATRES.—The Building Act Committee of the Metropolitan Board of Works last week recommended that legal proceedings should be taken against persons keeping open certain theatres, to enforce compliance with the Board's notice under their Powers Act, 1882, in respect to improved facilities of exit from the buildings, and that the Lord Chamberlain be informed that the Board agree with his lordship's suggestions in reference to necessary alterations being made in other theatres; but as it does not appear that the Board have powers to enforce the carrying out of the work, they desire to leave the matter in his lordship's hands.

ROYAL BERKSHIRE HOSPITAL.—On the 7th inst., the fiftieth annual Court of Governors (the Jubilee anniversary) was held at this institution, which was opened on May 27th, 1839, with accommodation for fifty beds. That number has now been raised to 144. The in-patients during the past year had grown to 1151, while the out-patients had numbered 1943. A reconstruction of the sanitary arrangements throughout the building has now been completed. The treasurer's statement showed a deficit of £581. The "private nurses' department" had produced a considerable profit, the annual balance of which is now invested as a separate reserve fund for the security of the scheme.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY.—The annual meeting of the governors was held at the Town Hall, Cardiff, on the 27th ult., Mr. Charles Thompson presiding. The report stated that the expenditure for the past year exceeded the income by £164. New buildings were absolutely required, the estimated cost of which was £4000. A building fund had been opened by a subscription of £500 from the chairman. It was also deemed expedient to establish a medical school at the infirmary. The chairman, in moving the adoption of the report, stated he had been informed that to establish a medical school it would be necessary to keep up the number of beds to 120, which the funds were inadequate to do. The report was agreed to.

THE ROYAL SURREY COUNTY HOSPITAL.—The report for 1888 expresses the anxiety the past year had caused the governors in consequence of the enlargement of the hospital, which involved an additional annual expenditure of £700, with a declining revenue. If the present scale of expenditure is continued, the committee will have to face an outlay of about £500 per annum beyond their reliable income. The funded property is now £17,228 9s. 7d. The increase in the number of patients had been considerable—namely, from 4608 in 1887 to 4920 in 1888.

HUNTERIAN SOCIETY.—The following gentlemen were elected as officers of the Society for the ensuing twelve months at the annual general meeting on Feb. 13th:—President: Mr. R. Clement Lucas. Vice-Presidents: Drs. Fletcher Beach and Heinrich Port; Messrs. G. B. Hicks and A. H. Smee. Treasurer: Mr. W. Rivington. Trustees: Dr. H. I. Fotherby and Mr. J. M. Corner. Librarian: Mr. Arthur T. Davies. Orator: Dr. Stephen Mackenzie. Secretaries: Dr. F. Charlewood Turner and Mr. John Poland. Council: Messrs. S. H. Appleford, T. Lloyd Brown, J. S. E. Cotman, John Davies, T. Rowing Fendick, T. Mark Hovell, and R. G. Tatham; Drs. R. Hingston Fox, A. T. Gibbings, Dundas Grant, P. Horrocks, and J. H. Stowers.

MEDICAL NOTES IN PARLIAMENT.

The Samaritan Hospital.

IN the House of Lords on the 11th inst., Lord Magheramorne, in answer to Lord Fortescue, said that in October last the Metropolitan Board of Works granted permission to the Samaritan Hospital to advance its frontage on the Marylebone-road thirty feet. In deference to public opinion, the hospital subsequently brought in another plan for an advance of only twelve feet. That was sanctioned by the Board. The encroachment was not on the road, but on gardens. The Board stood within their legal rights, and the Samaritan Hospital had its legal rights in the concession granted to it.

The Vaccination Acts.

In the House of Commons on the 8th inst., Mr. Picton gave notice that on that day four weeks he would move for the appointment of a Royal Commission to inquire into the working of the Vaccination Acts.

Police at the Royal College of Surgeons.

On the 11th inst., Sir Guyer Hunter asked the Secretary of State for the Home Department for what purpose, and by whose authority, was a large number of the metropolitan police employed both inside and outside the Royal College of Surgeons on the afternoon of the 28th ult.—Mr. Matthews: I am informed by the Commissioner of Police that from information received at Scotland-yard there was some reason to apprehend disturbance at a meeting to be held at the College. The usual precautions under such circumstances were directed—namely, the placing of a few patrols in the vicinity to prevent any disorder which might arise. The superintendent, however, misconceived his instructions, and, contrary to usual practice, placed a force of men inside the building. He has been informed that he was wrong in so doing.—Sir Guyer Hunter inquired whether the right hon. gentleman was aware that on the morning of the occurrence the police were placed inside and outside the building after Mr. Costello, the counsel of the Association of the Members of the College of Surgeons, had given an assurance to Mr. Justice Stirling to make use of no other than legal means to obtain their rights.—Mr. Matthews: I have had no communication to that effect from Mr. Justice Stirling.

The Salaries of Prison Surgeons.

In answer to Mr. Craig Sellar, Mr. Jackson said: I have examined this question in connexion with the Scotch Prison Estimates for the next financial year. There is, on the whole, very little inequality between the salaries paid to the Scotch surgeons and those paid in England, and the only case that appeared to me to require revision was that of the surgeon at Barlinnie, whose scale will be improved.

The Carrying of Revolvers.

Mr. W. H. Smith, replying to Mr. Isaacson, said Her Majesty's Government were carefully considering this extremely difficult question.

Housing of the Working Classes.

Mr. Ritchie, in reply to Mr. F. Powell, said that when the Housing of the Working Classes Act, 1885, was passed the Local Government Board addressed circular letters to the urban and rural sanitary authorities throughout England and Wales explaining the provisions of the Act, and he had no doubt that these authorities were fully aware of their powers. If he had reason to believe otherwise, he would be quite prepared to adopt the honourable member's suggestion, and send out a fresh memorandum to the various local authorities.

Barrack Accommodation.

Mr. E. Stanhope, in making the customary annual statement in Committee of Supply on the Army Estimates, alluded to the necessity of efficient barrack accommodation, remarking that much was required to be done, and Government in this connexion intended to ask for a special vote later in the session. He declined to state now the amount of the contemplated expenditure on barracks, preferring to defer any further information until he had a complete scheme to lay before the House.—Lord Randolph Churchill and other speakers complained that most of the present barrack accommodation was insanitary and detrimental to the health and comfort of the troops. They agreed in urging the importance and wisdom of improved barrack accommodation.

Dr. Barr and Prison Discipline.

On the 12th inst., Mr. Matthews, in reply to Sir W. Harcourt, said that the letter published in *The Times* newspaper on the 9th inst., signed "James Barr," was published without the knowledge or authority of the Secretary of State. He had drawn Dr. Barr's attention to the rule against publications by official persons, and had requested him to observe it in future.—Sir W. Harcourt gave notice that he should take an early opportunity of calling the attention of the House to Dr. Barr's conduct.

Health of Sizing and Steaming Operatives.

On the 13th inst., Viscount Cranborne, on the appeal of Mr. Mundella, postponed until the 21st inst. his motion for the appointment of a Select Committee to inquire into the trade conditions and the health of the operatives engaged in sizing and steaming in the weaving of textile fabrics.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BAILEY, J. S., M.D. Giessen, F.R.C.S., L.R.C.P. Edin. L.M., L.F.P.S. Glasg., L.S.A., has been appointed Medical Officer of Health of Hazel-grove and Marple.

BELL, E. S., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer and Dispenser at the Infirmary, St. Olave's Union.

BLAKISTON, A. A., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Glastonbury Borough.

BUCKENHAM, J., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of the Cambridge Provident Medical Association.

CLEGG, WALTER, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for Boston Rural and Union Districts and Port.

DAVIES, EDWARD, M.D. St. And., M.R.C.S. and L.M. Eng., has been reappointed Medical Officer of Health for the No. 2 Rural District, Wrexham Union.

DOUDNEY, G. H., M.B. Durh., M.R.C.S., has been appointed Medical Officer of the Wainfleet District, Spilsby Union.

EDLIN, E. H., F.R.C.S. Edin., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health for Compton Gifford.

GREEN, G. S., L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed House Surgeon to the Loughborough Dispensary, vice Unitt, resigned.

HARDWICK, A., M.B., L.S.A., has been appointed Medical Officer of Health for the Newquay (Cornwall) Urban Sanitary District, vice T. Boyle, M.R.C.S., L.S.A., deceased. Also Admiralty Surgeon and Agent at Newquay and Mawgan Porth, Cornwall, vice T. Boyle, M.R.C.S., L.S.A., deceased.

HARRIS, THOMAS, M.D., M.R.C.P., has been appointed Honorary Physician to the Manchester Hospital for Consumption and Diseases of the Throat, vice Henry Simpson, M.D., appointed Consulting Physician.

HEASMAN, W. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of the Second District, Aylsham Union.

HOLM, JOHN, F.R.C.S. Edin., M.R.C.S., has been appointed Examiner in Physical Education (Ling's Swedish system) to the School Board for London.

HOUGH, J. H., M.A. Cantab., L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer of the Cambridge Provident Medical Association.

JOHNSTON, J. P., M.B., M.C. Edin., has been appointed District Surgeon of Durbanville, South Africa.

JONES, WILLIAM, L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for Ruabon, Wrexham Union.

KEMPE, C. M., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Shoreham.

MUMBY, B. H., M.D., C.M. Aberd., M.R.C.S., L.S.A., has been reappointed Medical Officer and Public Analyst of the Portsmouth Borough, also Medical Officer of the Port.

POPE, G. STEVENS, L.R.C.P. & S.E., L.F.P.S.G., has been appointed Medical Assistant to the Dundee Royal Asylum, vice Jas. Watson, M.B., C.M., resigned.

RYGATE, D. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of the Cambridge Provident Medical Association.

SERJEANT, D. M., M.D. St. And., M.R.C.S., has been appointed Medical Officer for the Camberwell District.

SHORT, THOS. SYDNEY, M.B. Lond., P.H.D. Cantab., has been appointed Resident Medical Officer to the Birmingham General Hospital, vice G. H. Melson, M.B., resigned.

SYMES, E. WEST, M.D. Edin., has been appointed Honorary Physician to the Halifax Tradesmen's Benevolent Institution, vice Wm. Alexander, M.D., deceased.

TATHAM, J. F. W., M.D., L.F.P.S. Glasg., has been appointed Medical Officer of Health for Manchester.

WALKER, FREDK. WM., M.B. & C.M. Aber., L.S.A., has been appointed Medical Officer and Public Vaccinator for the Barton District of the Darlington Union, vice W. H. Walker, M.D., deceased.

WALKER, GEORGE A., M.D. & C.M. Aber., M.R.C.S., L.S.A., has been appointed Medical Officer and Public Vaccinator for the Aldbrough District of the Richmond Union, vice W. H. Walker, M.D., deceased.

WIGLESWORTH, JOSEPH, M.D. Lond., M.R.C.P., has been appointed Lecturer on Mental Diseases in University College, Liverpool.

WOOD, E. ARCHER, L.R.C.P., M.R.C.S., L.S.A., has been appointed Medical Officer to the East Dulwich Division of St. Giles', Camberwell.

WOODHAMS, J. A., M.R.C.S., L.S.A., has been reappointed Medical Officer and Public Vaccinator to the First District and Workhouse, Rye Union, and Medical Officer of Health, Rye Port, No. 1 Rural and Union Districts.

WOODWARD, WM., M.D. St. And., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health, Malvern Link.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

BETHLEM HOSPITAL.—Two Resident Clinical Assistants for six months. Apartments, rations, and attendance provided, as the committee shall consider reasonable.

BRADFORD INFIRMARY AND DISPENSARY.—Dispensary Surgeon. Salary £100 per annum, with board.

GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon for six months. No salary, but residence, board, and washing provided.

NATIONAL ORTHOPÆDIC HOSPITAL (for the Deformed), Great Portland-street, London, W.—Surgical Registrar and Anæsthetist. Annual honorarium £20.

NEWPORT AND COUNTY INFIRMARY AND DISPENSARY, Newport, Mon.—House Surgeon. Salary £100 per annum, with board and residence (no stimulants).

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Senior Resident Medical Officer.

PUBLIC DISPENSARY, 59, Stanhope-street, Clare Market.—Resident Medical Officer. Salary £100 per annum, with furnished apartments, coals, and gas.

ROYAL BERKS HOSPITAL, Reading.—Assistant House Surgeon, for six months. Board and lodging provided.

ROYAL FREE HOSPITAL, Gray's-inn-road.—An additional Assistant Physician, to have care of out-patients only.

THETFORD UNION.—Medical Officer and Public Vaccinator for the Brandon District of this Union. Salary £45 11*s.* per annum, which includes the cost of all medicines &c., but exclusive of fees for fractures and midwifery cases.

UNIVERSITY COLLEGE, London.—Assistant Physician.

Births, Marriages, and Deaths.

BIRTHS.

ENGLAND.—On the 7th inst., at Southgate-street, Winchester, the wife of G. Fuller England, M.B., of a daughter.

HETLEY.—On the 6th inst., at Beaufort House, Church-road, Norwood, the wife of Dr. Henry Hetley, of a daughter.

HUNTINGTON.—On the 13th inst., at 43, South-street, St. Andrews, N.B., the wife of W. Huntington, M.R.C.S., L.R.C.P.Lond., of a daughter.

MARTIN.—On the 26th ult., at Stourport, Worcestershire, the wife of Donald C. Martin, M.A., M.D., of a daughter.

MORRIS.—On the 10th inst., at Gordon Lodge, Blackheath, the wife of Clarke K. Morris, M.R.C.S., of a son.

O'CONNELL.—On the 18th ult., at Neemuch, Central India, the wife of Surgeon D. V. O'Connell, M.D., Army Medical Staff, of a son.

ROBBS.—On the 6th inst., at Lodgewood, Gravesend, the wife of C. E. Robbs, M.B., B.Sc., of a son.

TIRARD.—On the 8th inst., at Weymouth-street, Portland-place, W., the wife of N. Tirard, M.D. Lond., F.R.C.P., of a daughter.

TREADWELL.—On the 7th inst., at Durham, the wife of O. F. N. Treadwell, Medical Officer H.M. Prison, of a daughter.

UPPLEBY.—On the 25th Jan., at Port Elizabeth, S. Africa, the wife of J. G. Uppleby, M.R.C.S., L.R.C.P., of a son.

WALPOLE-SIMMONS.—On the 9th inst., at Sidbury, Worcester, the wife of E. Walpole-Simmons, M.B., of a son.

WILLS.—On the 9th inst., at Bexhill, the wife of J. Pearce Wills, M.D., of a daughter.

MARRIAGES.

ANDERSON—MORRIS.—On the 5th inst., at St. Andrew's Church, Plymouth, Robert William Anderson, Surgeon Royal Navy, only son of the late Thomas Anderson, R.N., to Maud Edith, only child of Colonel Western G. Morris, late Madras Cavalry, and of Leigham-terrace, The Hoe, Plymouth.

WOLFE—MACDONALD.—On the 9th inst., at the Church of Speymouth, by the Rev. P. Dunn, M.A., and the Rev. R. Macpherson, B.D., J. R. Wolfe, M.D., F.R.C.S. Edin., of Brandon-place, Glasgow, to Helen Grant, second daughter of the late Allan Ronald Macdonald, M.D., Melbourne.

DEATHS.

BELL.—On the 6th inst., at The Quarry House, Bletchingley, William Bell, M.D., son of Charles Bell, M.D., of Irvine and Norbiton Park, in his 90th year.

GIBSON.—On the 5th inst., at 4, Brighton-place, Portobello, Edinburgh, Andrew Murray Gibson, M.D., Kingston, Canada, L.R.C.P., L.R.C.S. Edin.

HARRIS.—On the 8th inst., at Brunswick-road, Hove, Brighton, Wintour Harris, F.R.C.S., late of Clapham-road, in his 82nd year.

JOHNSTON.—On the 7th inst., at St. Stephen's-green, North Dublin, George Johnston, M.D., F. and ex-President K.Q.C.P.I., F.R.G.S., aged 74.

MCCASKIE.—On the 8th inst., at 12, Sydney-place, Onslow-square, S.W., Janet Bertram, the beloved wife of Norman McCaskie, M.D., in her 38th year.

POLDEN.—On the 2nd Jan., 1889, suddenly, at Tipperah, India, R. J. Polden, B.A., M.B., B.Ch. Dub., Surgeon Bengal Army.

SANKEY.—On the 8th inst., at Boreatton Park, Baschurch, Salop, William Henry Octavius Sankey, M.D. Lond., F.R.C.P., aged 75.

WORK.—On the 8th inst., at Lossiemouth, Elgin, William Work, L.R.C.P., L.R.C.S. Edin.

*N.B.—A fee of 5*s.* is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

Medical Diary for the ensuing Week.

Monday, March 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. Charles Stewart: The Integumentary System in Plants and Animals.

SOCIETY OF ARTS.—8 P.M. Mr. Walter Crane: The Decoration and Illustration of Books. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Mr. George Hoken: A case of Auto Intra-laryngeal Operation.—Mr. Hayman: A case of Facial Disfigurement; supplying an artificial eye, cheek, and obturator.—Mr. Bruce Clarke: A case of Multiple Exostosis.—Mr. Pitts: A case of Median Hare-lip.—Dr. Beevor: A case of Œdema of the Face following Erysipelas. And others.

Tuesday, March 19.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same days, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. G. J. Romanes: Before and after Darwin.

ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Arlidge: Occupations and Trades in Relation to Public Health. (Milroy Lecture.)

SOCIETY OF ARTS.—8 P.M. Carlo Giuliano: The Art of the Jeweller.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Sheild: Complete Rupture of Left Bronchus by Fractured Rib.—Dr. Norman Moore: Melanotic Sarcoma of Liver.—Dr. Pitt: Lymphoma of Stomach.—Mr. D'Arcy Power: Specimens of Talipes.—Mr. Sydney Jones: Tumour removed from Scarpa's Triangle.—Dr. Gulliver: Caseating Gland projecting into Trachea.—Dr. Mott: Aneurysm of Ulnar and Brachial Arteries, the Result of Embolism.

Wednesday, March 20.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M. Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. Charles Stewart: The Integumentary System in Plants and Animals.

SOCIETY OF ARTS.—8 P.M. Prof. A. B. W. Kennedy: Objects and Methods of the Society of Arts Motor Trials.

Thursday, March 21.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. J. Henry Middleton: Houses and their Decoration from the Classical to the Mediæval Period.

ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Arlidge: Occupations and Trades in Relation to Public Health. (Milroy Lecture.)

Friday, March 22.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

CHARING-CROSS HOSPITAL.—Mr. J. Astley Bloxam: Surgical Landmarks. (Post Graduate Lecture.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. Charles Stewart: The Integumentary System in Plants and Animals.

CLINICAL SOCIETY OF LONDON.—Living Specimens at 8 P.M.:—Mr. A. P. Gould: Diffuse Lipoma.—Dr. A. Wilson: Congenital Emaciation of Uncertain Cause.—Dr. S. Mackenzie: Associated Paralysis of One Half of Tongue, Soft Palate, and Vocal Cord on the Same Side, and other Paralytic Lesions.—Dr. Arkle: Mercurial Tremors.—Dr. Barlow: Cured Subclavian Aneurysm.—Dr. A. Garrod: Pseudo-hypertrophic Paralysis. Papers at 9 P.M.:—Mr. Barwell: Cases of Lateral Curvature of Spine illustrating a Method of Measuring Curves.—Mr. Jacobson: Case of Nephro-lithotomy.—Dr. W. E. Steavenson and Mr. Butler-Smythe: Case of Hydro-nephrosis caused by Renal Calculi; Nephro-lithotomy; Ulceration into a Branch of the Right Renal Artery by an undetected Spiked Calculus, with Fatal Hæmorrhage on the Seventh Day after Operation; Autopsy.

ROYAL INSTITUTION.—9 P.M. Mr. Eadweard Muybridge: The Science of Animal Locomotion in its Relation to Design in Art (illustrated by the zoopraxiscope).

Saturday, March 23.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Rt. Hon. Lord Rayleigh: Experimental Optics (Polarisation; Wave Theory).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 14th, 1889.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 8	29·31	S.	49	49	67	54	29	·37	Raining
" 9	29·54	S.W.	42	40	88	51	39	.23	Cloudy
" 10	29·74	E.	40	38	..	45	36	..	Overcast
" 11	29·94	N.E.	39	37	86	46	36	..	Cloudy
" 12	30·29	S.W.	36	34	57	51	32	..	Raining
" 13	30·18	S.W.	45	43	72	54	36	·03	Overcast
" 14	30·37	N.	43	41	89	47	40	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

PREPARATION FOR MEDICAL MISSIONARY WORK.

China is doubtless aware that the road from unqualified chemist to medical man—to say nothing of that to medical missionary—is a long one, and where pecuniary resources are entirely lacking, a very arduous one. Still, we do not say that the difficulties are absolutely unsurmountable. We should be disposed to counsel our correspondent to remain in his present situation as a chemist's assistant for two or three years, and during that time to devote his spare time to passing one of the preliminary medical examinations—the London matriculation if possible—and to follow this up by studying the subjects of the preliminary scientific examination. By that time he may have been able to save enough money to pay the fees at one of the cheaper provincial medical schools. He could probably obtain an assistancy near where time would be given him to attend some of the lectures, and in this way he might hope to get through the curriculum in, say, five or six years. When fully qualified, a missionary society would, if it considered his a suitable case, send him to some theological college for a year's further training; and if this period were passed satisfactorily, his desire to become a medical missionary would be attained. A grant of small amount might perhaps be made at an early point of our correspondent's career, but that would depend on the view that the society applied to took of his personal qualifications, and the amount of funds in hand available for such a purpose. The Rev. J. Lowe, F.R.C.S.E., George-square, Edinburgh, would doubtless give information on the subject.

Mrs. S. C. Newton.—The statement is incomplete, and unsuitable for our columns.

HEPATIC PHLEBOTOMY.

To the Editors of THE LANCET.

SIRS,—Dr. G. Harley having very kindly sent me his pamphlet on "Hepatic Phlebotomy and Puncturing the Liver's Capsule," I find that in my paper on hepatic abscess in your issue of Jan. 5th last, I should have written "Dr. *G.* Harley," and not Dr. J. Harley. By the words "a mode of leeching the liver," I referred to the method of phlebotomy advised by the same authority in the above paper.

I am, Sirs, yours faithfully,

Bombay, Feb. 16th, 1889. L. K. HATCH, F.R.C.S.

SWISS MEDICAL STUDENTS.

ACCORDING to the Swiss *Statistical Journal*, the medical students attending the four universities of Basle, Zürich, Berne, and Geneva during the winter term of 1888-89 numbered 555.

Mr. J. Barker Smith.—When the papers are forwarded, they shall have due attention.

THE MEDICAL WORK AND PAY OF PROVIDENT DISPENSARIES.

THE *Surrey Comet* contains an interesting account of the Kingston Provident Dispensary, which in its various branches includes over 3000 members, including children. The adult members pay at the rate of a penny per week, and children, who require most attention, at the rate of a halfpenny. The annual report contained the following sentence:—"The remuneration received by the medical officers for their valuable services is necessarily very small, and would be still more inadequate but for the assistance which the dispensary obtains from the subscriptions of ordinary members." The amount contributed by the provident members is £505. The medical officers' fees amount to £508 18*s.* The following is the work done for this money. It may well be said that the pay is inadequate. Let us hope that the benevolent gentlemen who help provident dispensaries will try to raise the remuneration of the medical officers to a figure more worthy of the services rendered.

"*Kingston.*—Dr. Shirtliff certifies that he made 5580 visits at the homes of the patients, and attended 12,400 cases at his surgery. He also attended 99 midwifery cases. *Surbiton.*—Dr. Coleman certifies he paid 2460 visits at the houses of patients, and attended at his surgery 2035 cases. The number of midwifery cases was 45. *Norbiton and Kingston Hill.*—Dr. Bayley certifies that he attended 826 medical and 113 midwifery cases, to which he paid 4401 visits, besides numerous attendances at the surgery."

Bistoury.—The arrangement described has not been condemned by the Council. It would require to be worked carefully, and is open to the objection of *apparent* co-operation with an unqualified person.

MEDICAL PRACTICE IN BRITISH COLUMBIA.

To the Editors of THE LANCET.

SIRS,—In answer to your correspondent "Wren," I have pleasure in affording him the desired information.

The profession here has its interests looked after by a Medical Council elected every three years from the practitioners of the province. The Council holds examinations twice a year, beginning the first Tuesday in May and November in each year. Every qualified medical man desirous of practising in British Columbia must pass the examination, which, let it be understood, is *not* a qualifying one, but is the means to gaining registration and a licence to practise in the province. The fee for the examination is a hundred dollars (equal to about £20), and the subjects are anatomy, chemistry, physiology, pathology, materia medica, medical jurisprudence, theory and practice of medicine, surgery, obstetrics, and diseases of women and children. The examination is oral and written. There is an annual fee payable to the Council by each registered practitioner of ten dollars (£2). In case of rejection at the examination, half the fee is returned. I am, Sirs, yours truly,

Clinton, B.C., Feb. 18th, 1889. F.C.S.

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent "Wren," in your impression of Feb. 2nd, I may state that there is a tolerably severe examination to pass before the British Columbia Medical Council in both primary and final branches. The fee for the licence is one hundred dollars—say twenty guineas,—and there is an annual fee of ten dollars, or £2 10*s.* I send you with this a copy of the British Columbia Medical Act, which has been amended as regards Sec. 51, changing the registration fee from ten to one hundred dollars, and a Bill is before the local Legislature at present to still further amend the Act, though in what way I am unable to say. I am, Sirs, yours faithfully,

New Westminster, B.C., Feb. 23rd, 1889. M.D.

THE WATERS OF SANGEMINI.

ITALY'S wealth in mineral waters has long been recognised, but only of late years has she taken anything like energetic measures to have their special virtues understood and made available. Sangemini in Umbria is one of the first among her many sources to profit by her new energy in this direction, and, thanks to the labours of Chiminelli, Durante, and Tassi, the profession and the public have now ample information on its waters. They are entitled to rank, says Dr. Baccelli of the Roman University, with the best table waters in Europe, being powerfully anti-uric, and, when flavoured with wine, especially grateful at dinner. Foreigners resident in Italy, he thinks, need not resort to Vals or Vichy when they have Sangemini to fall back upon.

Dr. J. C. H. Peacocke.—Our correspondent would do well to communicate with the Secretary of the Red Cross Society, Geneva. As to the Portable Field Hospital Hut, we have carefully read the description of the invention of our correspondent, and fail to see that it possesses any distinct superiority over the Ducker Hospital, which received notice at our hands in THE LANCET of Sept. 17th, 1887, except, it may be, in the provision of roller shutters for walls, roof, and flooring. The advantage, or otherwise, of this arrangement would depend largely upon the material employed and the degree of excellence in construction.

Somerset.—We will bear the matter in mind.

DEAF-MUTES IN AMERICA.

Mr. Alexander Graham Bell writes to us from Washington, U.S., to rectify certain statements ascribed to him in an article in THE LANCET of July 28th, 1888, and calls the attention of our readers to the following facts:—The deaf-mutes of America are increasing at a greater rate in proportion than the population at large, both as regards the congenital and non-congenital cases. The numbers of non-congenital deaf-mutes show great and sudden fluctuations at different times on account of epidemical diseases that cause deafness. Meningitis is now the principal cause of deafness in America, and scarlet fever takes second rank. Statistics and the laws of heredity indicate that marriages between congenital deaf-mutes result in deaf-and-dumb children, and the continuous intermarriage of congenital deaf-mutes from generation to generation may ultimately result in the formation of a deaf variety of the human race in America. Cases can be cited where deafness has been handed down through four generations, and in one family congenital deaf-mutes have appeared for five successive generations in increasing numbers, and in which the younger deaf-mutes are marrying parties who are themselves deaf and dumb. Mr. Bell regards the total abolition of separate institutions for the deaf and dumb as impracticable, although they should be recognised as evils to be avoided as much as possible, as leading to acquaintanceships, and eventually intermarriages, between deaf-mutes. He suggests that the ordinary local schools should have a deaf and dumb class for the locally afflicted children, and thus prevent separation from their friends.

Africa should apply for information to F. H. Lenders, Esq., Consul-General for Belgium, 118, Bishopsgate-street Within, London, E.C.

G. F. R. might apply to the Secretary of the College.

"CIRCUMDUCTION IN ATROPHY OF THE DELTOID."

To the Editors of THE LANCET.

SIRS,—In reply to Dr. Mason's criticism on my paper in THE LANCET of Feb. 16th on the above subject, I acknowledge it would have been much better if I had said that possibly, or probably, atrophy would have supervened in the cases referred to. But as regards the virtues of rest and anodyne lotions in averting such a contingency, let me point out that in my first case the limb had had perfect rest for five weeks, without the least abatement of either pain or paralysis; in the second and third cases six months' rest had done nothing for the patients; whilst in the fourth case ten years of absolute rest had afforded no relief. I hope shortly to be able to lay before the readers of THE LANCET a few remarks on some fallacies regarding rest which may prove to be of practical value in other cases than atrophy. If my theory as to the cause of atrophy of the deltoid be incorrect, what is the true cause? And why should circumduction prove so effectual a remedy?

I am, Sirs, yours truly,

Southport, March 11th, 1889. G. COOPER HARRISON.

A CENTENARIAN.

A CORRESPONDENT writes:—"It may interest your readers to know that a lady died (last month) aged 107 years. She consulted me last year on account of "*commencing* nuclear cataract" in one eye, the other eye being perfectly healthy. She died of acute bronchitis. She had all her faculties to the last. She was until within a few weeks of her death in the habit of walking to church every Sunday morning—a distance of about 300 yards."

B. A. S. might apply to the Secretary of the Brussels Medical Graduates' Association, Dr. Pocock, The Limes, St. Mark's-road, N. Kensington, who would no doubt give the information desired.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Russell Reynolds, London; Sir H. Pitman, London; Mr. J. Tweedy, London; Mr. Macnamara, Dublin; Dr. Spehl, Brussels; Mr. Clement Lucas, London; Mr. J. H. Potter, Cullompton; Col. Morris; Mr. F. C. Turner, London; Mr. Wright, Halifax; Dr. Waller, Peterboro'; Mr. A. W. M. Robson, Leeds; Mr. Leigh, Liverpool; Dr. Matthews Duncan, London; Mr. Boobbyer, Nottingham; Messrs. Wertheimer and Co., London; Dr. Cullingworth, London; Dr. Steeves, Toxteth Park; Dr. Bronner, Bradford; Mr. Price, Bala; Mr. C. J. A. Kemp, Clapton; Mr. C. Wicks, Newcastle-on-Tyne; Mr. Nixon; Dr. Ormsby, Dublin; Mr. A. Cooper; Mr. Chesshire, Birmingham; Mr. Hosegood, Hull; Mr. C. R. Straton, Salisbury; Dr. Rioux, Quebec; Dr. A. F. Hawkins, Birmingham; Dr. Coghill, Birmingham; Dr. J. A. Jackson, Winnipeg; Miss Stephens; Dr. Dukes, Rugby; Mr. Farrow, Norfolk; Mr. Webber, Archachon; Mr. Coates, London; Mr. Ledwick, Paris; Mr. A. G. Bell, Washington; Mr. V. Richards; Mr. Furneaux Jordan, Birmingham; Dr. F. M. Pope, Leicester; Messrs. Cooper and Sons, Reading; Mr. H. F. Bailey, Blackheath; Mr. W. Andersen, London; Mr. G. E. Jeaffreson, Framlingham; Mr. Ethelston; Mr. C. Cotton, Ramsgate; Mr. F. S. D. Hogg, London; Mr. Harrison, Southport; Mr. Lockwood, London; Mr. Haslam, Birmingham; Mr. W. Horrocks, Bradford; Mr. De'ath, Buckingham; Dr. J. Holmes, Manchester; Mrs. S. C. Newton; Mr. H. W. McC. Hayes, London; Mr. J. Corbett, Kingston; Dr. Greville, Kegworth; Mr. R. T. Halliday, Ashton-in-Makerfield; Dr. Spender, Bath; Mr. Clark, Edinburgh; Mr. Brennen, York; Mr. Stone, Mons; China; G., London; F.C.S.; Somerset; Bistoury; H. W.; Anti-humbug; Z. M., Surrey; Bradford Infirmary; Alpha, London; A Junior.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Dowse, London; Mr. Latham, Ashton; Dr. Dowding, London; Mr. Milnes, Norfolk; Dr. Slater, Newcastle; Mr. Wilson, Antrim; Mr. Davies, Chester; Mr. Hay, Hull; Dr. Gibson, Westmoreland; Messrs. Stern and Co., London; Mr. Armstrong, Newcastle; Messrs. Grace and Co., Bristol; Mrs. Levick, Paris; Mr. Morton, London; Mr. Southern, Derby; Mr. Grant, Ajmere; Mr. Essex, Wales; Messrs. Eschmann and Co., London; Dr. Mackintosh, Tonbridge; Messrs. Battle and Co., Paris; Mr. Taylor, Notts; Mr. Scriven, Derby; Mr. Jones, North Wales; Mr. Warner, Sheffield; Dr. Popham; Messrs. Oppenheimer Bros., London; Dr. Hanna, Accrington; Mr. Heywood, Manchester; Mr. Doughty, Rugby; Mr. Martin, Worcestershire; Mrs. Llewellyn, Devon; Mr. Coates, London; Mr. Farrow, Thetford; Mr. Huntington, N.B.; Mr. Haywood, Notts; X. Y. Z., London; Medicus T., London; Physician, London; Forty, London; Zealand, London; Sheffield General Infirmary; L. L. L., London; R. H. H., London; Alcester Union; T., Lancashire; J. M., London; Bronchus, London; Bedford Nurses' Union; T. A., London; Superintendent, Newcastle; Herbert, Kidderminster; Medicus, Herts; J. K., London; Veritas, London; Alpha, London; R. S. R., London; K. B. D., London; Yorkshire, London; Athenæum, London; M.D., London; Spes, Yorks; S.W., London; Surgeon, Mons; Truth, London; Mrs. J., Yorks; Rev. The Vicar, Bucks; Chirurgus, London; Medicus, Leeds; P., York; Delta, London; W. A., London; Thrombus, London; Oliver, London; Dubois, London; B. T. B.

Mercury (Hobart), Reading Mercury, Bury Guardian, East Lancashire Echo, Herald and Weekly Free Press, Lincolnshire Chronicle, Evening Chronicle (Newcastle), Tasmanian News, Hertfordshire Mercury, Man of Ross, Surrey Advertiser, Cape Times, Mining Journal, Southport Visitor, Independent (London), Cape Argus, &c., have been received.

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